



CITY OF MILWAUKEE

DEPARTMENT OF PUBLIC WORKS

INFRASTRUCTURE SERVICES DIVISION

STREET AND BRIDGES UNIT

STRUCTURAL DESIGN

WEST LISBON AVENUE

BRIDGE, RETAINING WALLS AND APPROACHES

OVER

CANADIAN PACIFIC RAILWAY

LOCATED IN

MILWAUKEE, WI

JOB NUMBER: BR100140105

OFFICIAL NOTICE NUMBER: 20-1-2014

DATE: FEBRUARY 2014

CITY OF MILWAUKEE, WISCONSIN
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION

Specifications

Governing

WEST LISBON AVENUE
BRIDGE, RETAINING WALLS AND APPROACHES
OVER
CANADIAN PACIFIC RAILWAY

Milwaukee, Wisconsin

Job No. BR100140105



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SECTION 00 01 15 – LIST OF DRAWING SHEETS

The following listed Drawings accompany and form a part of the project contract documents along with these specifications and generally illustrate the nature of the work.

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2	Site and Elevation Plan
3	Cross Section Plan
4	Estimate of Quantities
5	Subsurface Exploration
6	Abutment Footing Plan
7	East Abutment Elevation
8	East Abutment Bill of Bars and Section
9	West Abutment Elevation
10	West Abutment Bill of Bars and Section
11	Deck Grades
12	Deck Plan
13	Deck Cross Sections
14	Deck Details and Bill of Bars
15	Lighting Details
16	Lighting Bill of Bars
17	Railing Elevation, Bar Details & Plan
18	Railing Details and Bill of Bars
19	Steel Railing Details
Northeast Retaining Wall (R-40-606)	
NE1	General Plan and Elevation
NE2	Subsurface Exploration

NE3	Wall Details and Quantities
NE4	Anchor Slab Plan
NE5	Railing Elevation, Bar Details & Plan
NE6	Parapet Details and Bill of Bars
NE7	Steel Railing Details
Southeast Retaining Wall (R-40-607)	
SE1	General Plan and Elevation
SE2	Subsurface Exploration
SE3	Wall Details and Quantities
SE4	Anchor Slab Plan
SE5	Railing Elevation, Bar Details & Plan
SE6	Parapet Details and Bill of Bars
SE7	Steel Railing Details
Northwest Retaining Wall (R-40-608)	
NW1	General Plan and Elevation
NW2	Subsurface Exploration
NW3	Wall Details and Quantities
NW4	Anchor Slab Plan
NW5	Railing Elevation, Bar Details & Plan
NW6	Parapet Details and Bill of Bars
NW7	Steel Railing Details
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SW1	General Plan and Elevation
SW2	Subsurface Exploration
SW3	Wall Details and Quantities
SW4	Anchor Slab Plan
SW5	Railing Elevation, Bar Details & Plan
SW6	Parapet Details and Bill of Bars
SW7	Steel Railing Details

CITY OF MILWAUKEE GENERAL
OFFICIAL NOTICE TO CONTRACTORS

Separate sealed bids for each project will be received until 10:30 a.m. of the bid opening date at which time bids will be publicly opened and read for furnishing all material and doing all work for each project in accordance with the requirements of the respective Official Notice on the bid form furnished in accordance with plans, specifications, contract documents, and proposed form of contract on file in the office of the Department of Public Works, Frank P. Zeidler Municipal Building, Room 507, Milwaukee, Wisconsin 53202.

PROSPECTIVE BIDDERS ARE TO CAREFULLY EXAMINE AND REVIEW ALL CONTRACT DOCUMENTS AND MATERIALS IN SAID OFFICE BEFORE SUBMITTING BID.

Affidavits of No Interest must accompany the bids, and the failure of prospective bidders to comply with these requirements may disqualify the bid.

The Contractor/Lessee agrees to comply with all applicable requirements of the American with Disabilities Act of 1990, 42 U.S.C. Section 12101, Et. Seq. the TDD Number for Public Works is (414) 286-2025.

As a part of the bid each bidder shall submit a full and complete list of all the proposed subcontractors and the class of work to be performed by each, which list shall not be added to nor altered without the written consent of the Commissioner of Public Works.

All Contractors and subcontractors are required to furnish or have on file a certificate of insurance in accordance with the insurance provisions of the General Specifications.

All Contractor(s) and subcontractor(s) are subject to the prevailing wage rates and hours of labor as prescribed by the Common Council of the City of Milwaukee consistent with provisions of Section 66.293 of the Wisconsin Statutes.

Copies of the actual work classifications and wage and fringe benefit rates enforced on this project are available in Room 516 of the Frank P. Zeidler Municipal Building.

Corporate surety will be required on performance and payment bonds for all projects listed in the following Official Notice. All applicable charter and statutory provisions and ordinances, all the provisions of this official notice, invitation to bid, general and detailed specifications, special provisions, proposal, schedule of fixed prices, addendum and plans for this project and all other contract documents set forth in the invitation to bid will be incorporated and made part of the contract as if therein set forth in full.

Tie bids, when the lowest ones, will be decided by the Commissioner of Public Works.

The Commissioner of Public Works reserves the right to reject any or all bids.

END SECTION 00 11 14

CITY OF MILWAUKEE SPECIFIC
OFFICIAL NOTICE NO.20-1-2014

Sealed bids will be opened on **Wednesday, March 19, 2014** at 10:30 A.M. for the **West Lisbon Avenue Bridge, Retaining Walls and Approaches**, located in Milwaukee, Wisconsin 53207.

IMPORTANT NOTICE: The Invitation to Bid, all bid documents and the Plans and Specifications for the listed project are all available electronically on the DPW website AS WELL AS **on the BID EXPRESS Website**. At this time, bids can be submitted using either Bid Express OR by purchasing and submitting paper bids in the usual manner. However, Bidders are strongly encouraged to utilize the electronic and/or Bid Express methods of obtaining bid documents and bid express for submitting bids, as in the near future the Department of Public Works intends to have bid documents available only electronically and through Bid Express, and to accept bid submittals only via Bid Express. Electronic documents can be obtained via <http://mpw.milwaukee.gov/bids/docs/20-2014> The Bid Express website is located at www.bidexpress.com. Any required addenda or response related to listed projects will be posted on both the DPW and Bid Express websites. At this time there are still a limited number of hard copies of the bid documents available at the address listed below. **IF YOU ONLY PRINT THE DOCUMENTS FROM THE DPW WEBSITE PLEASE CALL 414-286-3314 TO HAVE YOUR COMPANY'S NAME AND CONTACT INFORMATION PLACED ON THE PLAN HOLDERS' LIST.**

Completion Date: November 21, 2014

Liquidated Damages, per diem: \$750.00

THE SMALL BUSINESS ENTERPRISE REQUIREMENT FOR THIS CONTRACT IS 25%.

For a complete listing of City of Milwaukee certified SBE firms, see the Office of Small Business Development's (OSBD) website at <http://city.milwaukee.gov/Directory/OSBD>. If there are any questions regarding SBE certified firms, please contact OSBD office at (414) 286-5553.

THE RESIDENT PREFERENCE PROGRAM PARTICIPATION REQUIREMENT FOR THIS PROJECT IS 40%.

THE APPRENTICESHIP REQUIREMENTS FOR THIS CONTRACT ARE: Two (2).

Carpenter
Ironworker

THE CONTRACTOR SHALL SPECIFICALLY NOTE THE SMALL BUSINESS ENTERPRISE, RESIDENCY AND APPRENTICESHIP FORMS FOR THIS PROJECT. IF THE FORMS ARE NOT FILLED OUT PROPERLY, IT WILL BE CAUSE FOR REJECTION OF THE BID.

Bid Security Required: Bond (either Electronic thru Bid Express or Paper), Certified Check, Cashier's Check, or Cash to accompany bid: 10% of the Contractor's Base Bid. For those bids being submitted through BID EXPRESS and using a Paper Bond, the contractor may fax a signed/executed copy of the bid bond to the Department of Public Works Contract Office at 414-286-8110. **HOWEVER, THE FAXED**

COPY OF THE BOND MUST BE RECEIVED BY NO LATER THAN 10:30 A.M. ON THE SAME DATE THAT THE BIDS ARE DUE FOR THAT SPECIFIC OFFICIAL NOTICE, or the bid will be considered non responsive. The original bid bond document will then need to be submitted by the contractor the Department of Public Works Contract Office, Rm. 506, Municipal Building, immediately upon being notified that they are the apparent low bidder.

Plans and specifications will be furnished to the prospective bidders upon payment of a \$10.00 non-refundable fee in Room 507, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin 53202.

A \$10.00 per set additional non-refundable fee is required to obtain bid documents by mail.

Contractor must comply with all provisions of the CITY OF MILWAUKEE GENERAL OFFICIAL NOTICE TO CONTRACTORS published above.

THE TRAINING INCENTIVE **WILL NOT** APPLY TO THIS PROJECT.

Plans and project manual for this project may be viewed in the Infrastructure Services Division, Structural Design Unit, Room 907, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin.

END SECTION 00 11 17

SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

PART 1 – GENERAL

1.1 SUMMARY

- A. See also Instructions to Bidders in the “General Specifications” of the Department of Public Works, City of Milwaukee, Wisconsin, dated January 31, 1992, and all subsequent addenda.

1.2 BID FORM

- A. Submit a unit price for each item of work as indicated on the drawings and specified herein, complete in every respect.
- B. Bids will not be accepted in any form except on the bid form included with these specifications.
- C. The Contractor must recognize and abide by the right of the Owner (City of Milwaukee) to accept or reject any or all bids in the best interests of the City.

1.3 CONTRACT AWARD

- A. In case of discrepancy between the total Base Bid indicated in the proposal and that obtained by adding the products of the quantities of work and the unit prices, the unit prices shall govern. Any errors found in the total Base Bid indicated will be corrected, and the contract award shall be made to the lowest responsible bidder based on the corrected total Base Bid.
- B. The Commissioner of Public Works will award the contract based on the Base Bid only.

1.4 CONTRACT BREAKDOWN

- A. Shortly after the award of the contract, each Contractor shall submit a list showing the cost breakdown of the items in his contract. This list will be used as a basis for estimates of work completed for partial payment.

1.5 SITE VISIT

- A. All Contractors shall visit the site, consult the drawings and specifications, be familiar with the work of other Contractors and determine for himself all conditions affecting the work.
- B. Failure by a Contractor to be familiar with the project shall not release him from any obligation under this contract to complete the work in strict conformity with the plans and specifications and all City, State and Federal codes or regulations pertaining to the work.

1.6 TIME FOR COMPLETION

- A. The time allowed for completion is stated in the Specific Official Notice and shall start with the date on the Notice to proceed which will be sent to the Contractor directly following the signing of the

contract. The time allowed includes the time required for fabricating and procuring material and doing the work at the West Lisbon Avenue Bridge.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 21 13

SECTION 00 72 00 – GENERAL CONDITIONS

PART 1 – GENERAL

1.1 DEPARTMENT OF PUBLIC WORKS GENERAL SPECIFICATIONS

- A. Provisions of the Department of Public Works General Specifications dated January 31, 1992, and all subsequent addenda, shall apply to all contractors and subcontractors working on the project. Copies of the General Specifications may be obtained from the Department of Public Works General Office, Room 516, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin.

1.2 DEFINITIONS

- A. Commissioner: Commissioner of Public Works
- B. Division: Infrastructure Services Division.
- C. City Engineer: The City Engineer of the Infrastructure Services Division.
- D. Project Inspector: The authorized representative of the Commissioner assigned to make detailed inspection of any or all portions of the work and materials thereof.
- E. Addenda: Writing or graphic instruments issued prior to the execution of the contract which modify or interpret the bidding documents, including drawings and specifications by additions, deletions, clarifications or corrections. Addenda will become part of the contract documents when the contract is executed.
- F. Contract Drawings: Drawings of the work to be done as listed hereafter in the List of Drawing Sheets.
- G. Base Bid: Amount of money stated in the Bid Form as the sum of which the bidder offers to perform the work.
- H. Additive Alternate: Additional amount of money stated in the Bid Form as the sum of which the bidder offers to perform the alternate work.

1.3 CONTROL OF WORK AND MATERIALS

- A. Detail and Shop Drawings: Shop drawings and other additional drawings which may be required for each branch of the work shall be prepared by each respective contractor unless otherwise directed by the City Engineer. Prints shall be the same size as contract documents when practical. Prints of each drawing shall be submitted to the City Engineer for approval before proceeding with the work. Changes ordered by the City Engineer shall be made and revised prints submitted as above. The City Engineer's approval of drawing shall not relieve the contractor of responsibility for errors.

- B. Primary Lines and Grades: Will be established by the Contractor.
- C. Construction Lines and Grades: The Contractor must bear sole responsibility for the correct transfer of all construction lines and grades from the primary lines and grade points. He shall take such measurements from existing work as may be necessary to insure the proper construction of his work.
- D. Material Orders and Shipping Statements: The Contractor shall furnish to the City Engineer at least two (2) copies of all material orders and shipping statements. Itemized weights of the materials and individual units of finished work shall be shown.
- E. Weighing of Materials and Fabricated Units: The weighing of materials and fabricated units such as structural steel, casing, etc., when required, shall be done in the presence of the Commissioner's representative. The Contractor shall be responsible for the satisfactory weighing of such materials and units.
- F. Consignment and Delivery of Materials: The materials for the work shall be consigned to the contractor and he shall be responsible for the delivery of all materials required for the completion of the contract.

1.4 SAMPLES AND TESTS

- A. Method of Sampling: Samples of materials proposed or furnished for work may be taken by the Commissioner at any time; at the point of manufacture, point of delivery, or site of work. They will be selected, as far as practicable, in accordance with standard methods of sampling such materials as specified in the standard of the American Society of Testing and Materials. All sampling shall be done by authorized representatives of the Commissioner. Selections will be in an orderly and systematic manner, insuring samples representative of the lot.
- B. A.S.T.M. Standards: Wherever the abbreviation A.S.T.M. is used in connection with the number of a standard specification, the specification referred to shall be the standard of the American Society for Testing and Materials, designated by that number, including all revisions in affect on the date of award of the contract. Should a revised or amended standard be issued by the American Society for Testing and Materials which, in the opinion of the Commissioner, conflict with or causes undesirable changes in the standards referred to herein, the Commissioner reserves the right, by means of addenda to the specifications, to continue under the provisions of the pertinent standard referred to herein.
- C. Cost of Test Specimens and Samples: All test specimens of metals and all samples of non-metals required for tests shall be furnished by the Contractor without cost to the City.
- D. Cost of Tests: All tests on test specimens of metals will be made at the expense of the Contractor and the original test on samples of non-metals will be made at the expense of the City. In all cases, the testing procedure will be in accordance with standard A.S.T.M. tests for such materials. Subsequent tests of non-metals requested by the Contractor, or when such tests are permitted by A.S.T.M. Specification and approved by the Commissioner or subsequent tests ordered by the Commissioner will be made at the expense of the Contractor.

1.5 PROJECT COORDINATION

- A. Contractors are required, so far as possible; to arrange work and to dispose of materials so as not to interfere with the work or storage of materials of other contractors or City forces engaged upon the work.
- B. Contractor shall give full cooperation to other trades and furnish any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay.
- C. Where the work of a contractor will be installed in close proximity to the work of other trades, or where there is evidence that the work of a contractor will interfere with the work of other trades, he shall assist in working out space conditions to make satisfactory adjustments.
- D. If a contractor installs work before coordinating it with other trades or so as to cause interference with work of other trades, he shall make necessary changes in his work to correct the condition without extra charge.
- E. Contractors are required to join their work to that of others in a proper manner, and in accordance with the spirit of the plans and specifications, and to perform the work in the proper sequence in relation to that of other contractors, and as may be directed by the Project Inspector.

1.6 TECHNICAL SPECIFICATIONS AND DRAWINGS

- A. All contractors shall have complete sets of plans and specifications on the job site at all times.
- B. Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in drawings or Technical Specifications, the matter shall be immediately submitted to the City for decision. Said discrepancy shall not be adjusted by the contractor.

1.7 SAFETY REGULATIONS

- A. All work shall be done in accordance with the safety requirements set up by the Wisconsin Administrative Code Rules and the Occupational Safety and Health Administration (OSHA).

1.8 CODE RULES

- A. The rulings, regulations and laws of the following shall be complied with in the completion of this project:
 - 1. Wisconsin Administrative Code
 - 2. Occupational Safety and Health Administration (OSHA)
 - 3. Plumbing and Drainage Codes of the City of Milwaukee

- 4. City of Milwaukee Building Codes
- 5. Ordinances of the City of Milwaukee

1.9 APPROVALS

- A. Wherever the words “or equal”, or “approved equal”, or similar terms are used, it shall mean as approved by the Commissioner of Public Works or his agent. All drawings, bulletins, and data necessary for an approval shall be submitted in quadruplicate to the City Engineer. Such approval shall apply to design only and shall in no way relieve this contractor from his responsibility for the full performance of his contract. Evaluation of “or equal” products will be made at the time of shop drawing submission.

1.10 GENERAL SPECIFICATIONS

- A. When the General Specifications of the Department of Public Works are in conflict with any other specification referenced herein, the General Specifications of the Department of Public Works shall govern.

1.11 SAVINGS CLAUSE

- A. If any clause, item or other part of these specifications shall be deemed illegal or in conflict with code only that item or clause shall be deemed null and void within the specifications. All other items will remain in effect.

1.12 CONSTRUCTION PROGRESS MEETINGS

- A. The City reserves the right to schedule periodic construction progress meetings requiring the attendance of the contractors' and subcontractors' representatives as deemed necessary by the City.

1.13 MATERIAL HAULING

- A. All trucks involved in the hauling of removals, granular backfill, crushed aggregate, bituminous concrete pavement or any other construction material subject to spillage, either by wind or vibration, to or from the project on any highway or street shall be equipped with tail gates, adequate sideboards and canvas covers which will seal the truck box against spillage.
- B. The Contractor shall not perform work on nor haul materials of any kind along or across any portion of the project or adjacent streets on any holidays unless he shall notify and receive permission from the City Engineer.

1.14 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

- A. The Contractor shall remove existing bridges, and other structures or parts thereof within the roadway right-of-way, which are replaced or which interfere with new construction, unless otherwise provided in the contract. Such removal shall be incidental to other bid items, unless a

separate bid is taken on removal of old structures as hereinafter provided, or unless portions of existing structure units fall within the limits of the excavation for structures.

- B. Structures beyond the limits of the right-of-way shall remain in place unless otherwise specified in the contract.

1.15 PLANS AND WORKING DRAWINGS

- A. The approved plans will be supplemented by such working drawings and computations as are necessary to adequately control the work. It is mutually agreed that all authorized alterations of the approved plans shall be in writing. No changes shall be made on any plan or drawing after the same has been approved by the City Engineer, except by direction of the City Engineer.
- B. Working drawings for structures shall be furnished by the contractor and shall consist of such detailed plans and computations as may be required for the prosecution of the work and which are not included in the plans furnished by the engineer. Such working drawings shall be approved by the engineer. Plans may also be required and in such cases shall be likewise subject to approval, unless approval is waived by the City Engineer.
- C. It is expressly understood, however, that approval by the City Engineer of the contractor's working drawings does not relieve the contractor of any responsibility for accuracy of dimensions and details or conformity of his working drawings with the approved plans and specifications.
- D. The contract price shall include the cost of furnishing all working drawings and the contractor will be allowed no extra compensation for such drawings.

1.16 CONFORMITY WITH PLANS AND SPECIFICATIONS

- A. All work performed and all materials furnished will be in reasonably close conformity with the lines, grades, cross sections, dimensions and material requirements shown on the plans or indicated in the specifications. It shall be finished to produce quality work and appearance within limits of precision reasonably expected of good construction.
- B. Specific specification values and prescribed tolerance amounts or limits or minimum or maximum values may be specified. Whenever such tolerances or ranges are specified, the production and processing of material or performance of the work shall be so controlled that the material or work will substantially meet the specific value or fall substantially within the specified range or limits and shall only occasionally be of borderline quality or dimensions.
- C. Whenever tolerances, limits or minimum and maximum values are not specified, reasonable and accepted standards or established manufacturing or construction tolerances will be permitted.
- D. The lines, grades, typical sections, and dimensions shown on the plans are subject to adjustment by the engineer during construction, but any deviation of a character not contemplated or provided for in the plans, specifications or working drawings that may be required by the exigencies of construction or otherwise will be determined by the engineer and authorized by him in writing.

- E. In the event the engineer finds materials which are incorporated in the work, or the finished product in which the materials are used, to be not within reasonably close conformity with the plans and specifications, he will then make a determination whether or not reasonably acceptable work has been produced and can be accepted and remain in place. If the engineer determines that reasonably acceptable work has been produced and can be accepted and remain in place, he will document the basis of acceptance by contract modification or as provided elsewhere in these specifications which will provide for an appropriate adjustment in the contract price for such work or materials, either as he deems necessary to conform to his determination based on engineering judgment, or as specifically provided for elsewhere in these specifications.
- F. In the event the engineer finds that the materials, the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the contractor.

1.17 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

- A. These specifications, the supplemental specifications, the plans, special provisions and all supplemental documents are essential parts of the contract and a requirement occurring in one is binding as though occurring in all. They are intended to be cooperative, to describe and provide for a complete work. In the event of a discrepancy between the drawing and the figured dimensions thereon, the figured dimensions, unless obviously incorrect, shall govern over scaled dimensions. In the case of a discrepancy between the supplemental specifications and these specifications, the supplemental specifications shall govern; between the plans and these specifications or the supplemental specifications, the plans shall govern; and between the special provisions and these specifications, supplemental specifications or the plans, the special provisions shall govern.
- B. The contractor shall take no advantage of any apparent error or omission in the plans or specifications, and the engineer shall be permitted to make such corrections and interpretations, as may be deemed necessary for the fulfillment of the intent of the plans and specifications.

1.18 PERSONAL LIABILITY OF PUBLIC OFFICIALS

- A. In carrying out any of the provisions of this contract or in exercising any power or authority granted to them thereby, there shall be no personal liability upon the Department, its agents and employees, it being understood that in such matters they act as agents and representatives of the City. Any right of action by the contractor against the Department, or its agents or employees, is hereby expressly waived.

1.19 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES

- A. The contractor shall give notice to the proper authorities in charge of street, gas and water pipes, electric and other conduits, railroad, poles, manholes, catch basins, sewers and all other property that may be affected by the contractor's operations, at least three days excluding Saturday, Sunday and legal holidays, before breaking ground.

- B. The contractor shall not hinder or interfere with any persons in the protection of such property, or with the operations or utilities, at any time. The contractor must obtain all necessary information in regard to existing utilities. He shall protect such utilities from damage and unnecessary exposure.
- C. The contractor must also obtain all necessary information in regard to the planned installation of new utilities and make proper provision and give proper notification so that new utilities can be installed at the proper time without delay to the contractor or unnecessary inconvenience to the owner. The location of new underground utilities, planned to be installed concurrently with the highway improvements, shall not be covered with pavement prior to the installation of such facilities.

1.20 MEASUREMENT OF QUANTITIES

- A. General: All work completed under the contract will be measured by the engineer according to United States standard measure. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

The completed work will be measured for final payment by the engineer, as specified for the various items elsewhere in these specifications, to determine the quantities of such items of work performed, except when agreements have been made providing for compensation on the basis of plan quantities as hereinafter provided or when contract change orders have been executed providing for other methods of measurement. The contractor will be paid for the actual amount of work performed in accordance with the contract, as shown by the final measurements or upon the basis of plan quantities.

If the contractor and the engineer agree in writing that the quantities of certain items or portions of items of work as set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, are in substantial agreement with the actual quantities of work performed, compensation therefore will be made based on the quantities set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, without measurement thereof, and the contractor shall accept such compensation as full payment for such items or portions of items. When standard manufactured items are specified such as fences, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, sections dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

- B. Volume: All materials which are specified for measurement by the cubic yard in the vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. No allowance will be made for the settlement of material in transit.

The measurement of the material, the type and size of vehicle, the determination of capacity and the marking of the vehicle for identification shall conform to the requirements of Section 617 of the standard specification.

When permitted elsewhere in these specifications, or in the special provisions, material specified to be measured by the cubic yard may be weighed and the weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the engineer and shall be agreed to by the contractor before such method of measurement of pay quantities is used.

- C. Weight: All aggregates and bituminous mixtures which are specified for measurement by the ton (2,000 lbs.) shall be weighed on platform scales or other approved scales, furnished by and at the expense of the contractor. Said scales shall be satisfactory to the engineer and they shall be tested by the engineer or by authorized testing firms or agencies as often as the engineer may deem necessary to ensure their accuracy.

When materials are weighed in the hauling vehicle, gross weights shall be measured by the ton may be measured by the cubic yard and the cubic yards will be converted to tons for payment purposes. Factors for conversion from volume measurement to weight measurement will be determined by the engineer and shall be agreed to by the contractor before such method of measurement of pay quantities is used.

1.21 GUARANTEE

- A. The contractor shall guarantee to replace or repair promptly at his own expense, as directed by the Commissioner of Public Works or his agent, all workmanship or materials in which defects may develop within one (1) year from the date of final acceptance of his work. This guarantee includes all damage done by the operator due to faulty equipment, poor installation or poor construction. The City shall also receive any extended guarantees or warranties normally supplied by any vendor or manufacturer for material or equipment incorporated in the work.

1.22 ENVIRONMENTAL PROTECTION

- A. The Contractor shall establish and carry out a program for immediate removal of debris during the bridge rehabilitation in order to prevent the accumulation of unsightly, deleterious and/or potentially polluting materials in the river
- B. Utilize construction methods which will minimize local erosion or siltation.
- C. Place excess dredged or excavated materials in a confined area in such a manner as to preclude the return of polluted materials to the river by surface runoff or by leaching.
- D. Place excess dredged or excavated materials in a confined area in such a manner as to preclude the return of polluted materials to the river by surface runoff or by leaching.
- E. Take special care to avoid any spillage of oil, fuels, or any other types of pollutants while working within or along the banks of the river.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

00 72 00/9

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 72 00

SECTION 00 73 01 - INSPECTION CHARGES

PART 1 – GENERAL

1.1 INSPECTION CHARGES

- A. The Contractor will be charged a fee for inspection for each and every day such inspection is required after the time allowed for completion has expired.
- B. The amount of the fee for inspection shall be \$500 per day.
- C. The date of completion is stated in the Specific Official Notice and shall start with the date on the Notice to Proceed which will be sent to the Contractor directly following the signing of the contract. The time allowed includes the time required for fabricating and procuring material and doing the work at the site.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 73 01

00 73 43/1
PREVAILING WAGE RATE DETERMINATION
Issued by the State of Wisconsin
Department of Workforce Development
Pursuant to s. 66.0903, Wis. Stats.
Issued On: 01/06/2014
Amended On: 01/13/2014

DETERMINATION NUMBER: 201400011

EXPIRATION DATE: Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2014. If NOT, You MUST Reapply.

PROJECT NAME: ALL PUBLIC WORKS PROJECTS UNDER SEC 66.0903, STATS - CITY OF MILWAUKEE

PROJECT LOCATION: MILWAUKEE CITY, MILWAUKEE COUNTY, WI

CONTRACTING AGENCY: CITY OF MILWAUKEE-DEPT OF PUBLIC WORKS

CLASSIFICATION:	Contractors are responsible for correctly classifying their workers. Either call the Department of Workforce Development (DWD) with trade or classification questions or consult DWD's Dictionary of Occupational Classifications & Work Descriptions on the DWD website at: dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm .
OVERTIME:	<p>Time and one-half must be paid for all hours worked:</p> <ul style="list-style-type: none">- over 10 hours per day on prevailing wage projects- over 40 hours per calendar week- Saturday and Sunday- on all of the following holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25;- The day before if January 1, July 4 or December 25 falls on a Saturday;- The day following if January 1, July 4 or December 25 falls on a Sunday. <p>Apply the time and one-half overtime calculation to whichever is higher between the Hourly Basic Rate listed on this project determination or the employee's regular hourly rate of pay. Add any applicable Premium or DOT Premium to the Hourly Basic Rate before calculating overtime.</p> <p>A DOT Premium (discussed below) may supersede this time and one-half requirement.</p>
FUTURE INCREASE:	When a specific trade or occupation requires a future increase, you MUST add the full hourly increase to the "TOTAL" on the effective date(s) indicated for the specific trade or occupation.
PREMIUM PAY:	If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.
DOT PREMIUM:	This premium only applies to highway and bridge projects owned by the Wisconsin Department of Transportation and to the project type heading "Airport Pavement or State Highway Construction." DO NOT apply the premium calculation under any other project type on this determination.
APPRENTICES:	Pay apprentices a percentage of the applicable journey person's hourly basic rate of pay and hourly fringe benefit contributions specified in this determination. Obtain the appropriate percentage from each apprentice's contract or indenture.
SUBJOURNEY:	Subjourney wage rates may be available for some of the trades or occupations indicated below with the exception of laborers, truck drivers and heavy equipment operators. Any employer interested in using a subjourney classification on this project MUST complete Form ERD-10880 and request the applicable wage rate from the Department of Workforce Development PRIOR to using the subjourney worker on this project.

This document **MUST BE POSTED** by the **CONTRACTING AGENCY** in at least one conspicuous and easily accessible place **on the site of the project**. A local governmental unit may post this document at the place normally used to post public notices if there is no common site on the project. This document **MUST** remain posted during the entire time any worker is employed on the project and **MUST** be physically incorporated into the specifications and all contracts and subcontracts. If you have any questions, please write to the Equal Rights Division, Labor Standards Bureau, P.O. Box 8928, Madison, Wisconsin 53708 or call (608) 266-6861.

The following statutory provisions apply to local governmental unit projects of public works and are set forth below pursuant to the requirements of s. 66.0903(8), Stats.

s. 66.0903 (1) (f) & s. 103.49 (1) (c) "PREVAILING HOURS OF LABOR" for any trade or occupation in any area means 10 hours per day and 40 hours per week and may not include any hours worked on a Saturday or Sunday or on any of the following holidays:

1. January 1.
2. The last Monday in May.
3. July 4.
4. The first Monday in September.
5. The 4th Thursday in November.
6. December 25.
7. The day before if January 1, July 4 or December 25 falls on a Saturday.
8. The day following if January 1, July 4 or December 25 falls on a Sunday.

s. 66.0903 (10) RECORDS; INSPECTION; ENFORCEMENT.

(a) Each contractor, subcontractor, or contractor's or subcontractor's agent performing work on a project of public works that is subject to this section shall keep full and accurate records clearly indicating the name and trade or occupation of every person performing the work described in sub. (4) and an accurate record of the number of hours worked by each of those persons and the actual wages paid for the hours worked.

s. 66.0903 (11) LIABILITY AND PENALTIES.

(a) 1. Any contractor, subcontractor, or contractor's or subcontractor's agent who fails to pay the prevailing wage rate determined by the department under sub. (3) or who pays less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor is liable to any affected employee in the amount of his or her unpaid wages or his or her unpaid overtime compensation and in an additional amount as liquidated damages as provided under subd. 2., 3., whichever is applicable.

2. If the department determines upon inspection under sub. (10) (b) or (c) that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the department shall order the contractor to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages within a period specified by the department in the order.

3. In addition to or in lieu of recovering the liability specified in subd. 1. as provided in subd. 2., any employee for and in behalf of that employee and other employees similarly situated may commence an action to recover that liability in any court of competent jurisdiction. If the court finds that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the court shall order the contractor, subcontractor, or agent to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages.

5. No employee may be a party plaintiff to an action under subd. 3. unless the employee consents in writing to become a party and the consent is filed in the court in which the action is brought. Notwithstanding s. 814.04 (1), the court shall, in addition to any judgment awarded to the plaintiff, allow reasonable attorney fees and costs to be paid by the defendant.

BUILDING OR HEAVY CONSTRUCTION

Includes sheltered enclosures with walk-in access for the purpose of housing persons, employees, machinery, equipment or supplies and non-sheltered work such as canals, dams, dikes, reservoirs, storage tanks, etc. A sheltered enclosure need not be "habitable" in order to be considered a building. The installation of machinery and/or equipment, both above and below grade level, does not change a project's character as a building. On-site grading, utility work and landscaping are included within this definition. Residential buildings of four (4) stories or less, agricultural buildings, parking lots and driveways are NOT included within this definition.

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
101	Acoustic Ceiling Tile Installer Future Increase(s): Add \$1.25/hr on 6/2/2014.	33.68	19.81	53.49
102	Boilermaker	31.91	26.47	58.38
103	Bricklayer, Blocklayer or Stonemason Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.37	18.00	53.37
104	Cabinet Installer	30.48	15.90	46.38
105	Carpenter Future Increase(s): Add \$1.25/hr on 6/2/2014. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.68	19.81	53.49
106	Carpet Layer or Soft Floor Coverer	32.93	19.71	52.64
107	Cement Finisher	32.07	17.53	49.60
108	Drywall Taper or Finisher	29.87	19.99	49.86
109	Electrician Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.82	22.61	55.43
110	Elevator Constructor	43.21	26.06	69.27
111	Fence Erector	16.00	3.33	19.33
112	Fire Sprinkler Fitter	38.50	19.65	58.15
113	Glazier	34.19	18.25	52.44
114	Heat or Frost Insulator	33.68	24.31	57.99
115	Insulator (Batt or Blown)	15.00	9.50	24.50

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
116	Ironworker Future Increase(s): Add \$.80/hr on 6/1/2014. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	30.52	23.47	53.99
117	Lather	32.93	19.81	52.74
118	Line Constructor (Electrical)	38.25	17.63	55.88
119	Marble Finisher	26.89	19.18	46.07
120	Marble Mason	35.80	16.87	52.67
121	Metal Building Erector	22.05	8.08	30.13
122	Millwright	28.53	24.98	53.51
123	Overhead Door Installer	20.95	4.94	25.89
124	Painter	29.52	18.84	48.36
125	Pavement Marking Operator	30.00	0.00	30.00
126	Piledriver Premium Increase(s): Add \$.65/hr for Piledriver Loftsmen; Add \$.75/hr for Sheet Piling Loftsmen. DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	29.56	25.71	55.27
127	Pipeline Fuser or Welder (Gas or Utility)	31.82	19.74	51.56
129	Plasterer	31.56	18.18	49.74
130	Plumber	37.97	17.30	55.27
132	Refrigeration Mechanic	39.26	19.30	58.56
133	Roofer or Waterproofer	29.40	17.05	46.45
134	Sheet Metal Worker	36.17	18.04	54.21
135	Steamfitter Future Increase(s): Add \$1.70/hr on 6/1/2014.	39.76	21.09	60.85
137	Teledata Technician or Installer Future Increase(s): Add \$.85/hr on 6/1/2014; Add \$.86/hr on 6/1/2015. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	24.89	17.15	42.04

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
138	Temperature Control Installer	17.39	4.18	21.57
139	Terrazzo Finisher	26.89	19.18	46.07
140	Terrazzo Mechanic	30.20	18.42	48.62
141	Tile Finisher	23.85	17.18	41.03
142	Tile Setter	29.45	16.30	45.75
143	Tuckpointer, Caulker or Cleaner	34.57	16.42	50.99
144	Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
146	Well Driller or Pump Installer	25.32	15.65	40.97
147	Siding Installer	25.92	18.04	43.96
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	29.16	14.34	43.50
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	14.86	45.46
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.63	40.41
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	28.74	17.27	46.01

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
201	Single Axle or Two Axle	33.82	17.60	51.42
203	Three or More Axle	18.50	18.42	36.92
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 5/30/2016.	33.02	18.10	51.12
205	Pavement Marking Vehicle	18.50	18.42	36.92
207	Truck Mechanic	18.50	18.42	36.92

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Premium Increase(s): Add \$.11 for mortar mixer, fork lift operator, air and electric equipment and power buggy operators; Add \$.22 for jackhammer operator, certified welder, gunite machineman.	28.31	16.62	44.93
302	Asbestos Abatement Worker	19.00	0.00	19.00
303	Landscaper	14.28	8.24	22.52
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	19.78	17.04	36.82
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased) Premium Increase(s): DOT PREMIUMS: Pay two times the hourly basic rate on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	17.71	16.01	33.72
314	Railroad Track Laborer	13.50	4.06	17.56
315	Final Construction Clean-Up Worker	28.31	16.62	44.93

**HEAVY EQUIPMENT OPERATORS
SITE PREPARATION, UTILITY OR LANDSCAPING WORK ONLY**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfg's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfg's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket). Future Increase(s): Add \$1.00/hour 6/2/2014; Add \$1.50/hour 6/1/2015; Add \$1.60/hour 5/30/2016.	34.07	18.10	52.17

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Future Increase(s): Add \$1.00/hour 6/2/2014; Add \$1.50/hour 6/1/2015; Add \$1.60/hour 5/30/2016.	34.07	18.10	52.17
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	30.82	18.96	49.78
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	38.80	18.98	57.78
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator.	38.80	18.98	57.78
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	34.50	18.98	53.48
507	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	34.50	18.98	53.48

**HEAVY EQUIPMENT OPERATORS
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
508	Boring Machine (Directional); Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1.25/hr on 6/1/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Crane Operators with CCO certification add \$.50/hr. Cranes with boom length over 200 ft. not exceeding 300 ft. OR lifting capacity over 200 ton not exceeding 300 ton add \$.50/hr. Over 300 ton OR 300 ft. add \$.01/hr. per foot OR ton whichever is greater.	40.36	19.15	59.51
509	Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Boring Machine (Horizontal or Vertical); Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs. & Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Pile Driver; Versi Lifts, Tri-Lifts & Gantrys (20,000 Lbs. & Over). Future Increase(s): Add \$1.25/hr on 6/1/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Crane Operators with CCO certification add \$.50/hr.	39.86	19.15	59.01
510	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Dredge (NOT Performing Work on the Great Lakes); Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Hydro-Blaster (10,000 PSI or Over); Milling Machine; Skid Rig; Traveling Crane (Bridge Type). Future Increase(s): Add \$1.25/hr on 6/1/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Crane Operators with CCO certification add \$.50/hr.	39.36	19.15	58.51

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
511	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Environmental Burner; Gantrys (Under 20,000 Lbs.); Grader or Motor Patrol; High Pressure Utility Locating Machine (Daylighting Machine); Manhoist; Material or Stack Hoist; Mechanic or Welder; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tining or Curing Machine; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add \$1.25/hr on 6/1/2014; Add \$1.55/hr on 6/1/2015.	38.67	19.15	57.82
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames. Future Increase(s): Add \$1.25/hr on 6/1/2014; Add \$1.55/hr on 6/1/2015.	31.64	19.15	50.79
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oilier; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.25/hr on 6/1/2014; Add \$1.55/hr on 6/1/2015.	31.64	19.15	50.79
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment).	36.34	21.14	57.48
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment). Future Increase(s): Add \$1.60/hr on 06/01/2014; Add \$1.65/hr on 06/01/2015	33.26	18.55	51.81
516	Fiber Optic Cable Equipment Future Increase(s): Add \$1.75/hr on 02/01/2014.	27.89	17.20	45.09

SEWER, WATER OR TUNNEL CONSTRUCTION
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Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
103	Bricklayer, Blocklayer or Stonemason Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.10	18.40	53.50
105	Carpenter Future Increase(s): Add \$1.25/hr on 6/2/2014. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.68	19.81	53.49
107	Cement Finisher Future Increase(s): Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	33.51	16.13	49.64
109	Electrician Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.82	22.61	55.43
111	Fence Erector	16.00	3.33	19.33
116	Ironworker	31.25	19.46	50.71
118	Line Constructor (Electrical)	38.25	17.63	55.88
125	Pavement Marking Operator	16.00	7.35	23.35
126	Piledriver	30.98	15.90	46.88
130	Plumber	33.75	14.07	47.82
135	Steamfitter	37.76	19.99	57.75
137	Teledata Technician or Installer	24.75	16.08	40.83

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
143	Tuckpointer, Caulker or Cleaner	34.57	16.42	50.99
144	Underwater Diver (Except on Great Lakes)	38.80	18.98	57.78
146	Well Driller or Pump Installer	25.32	15.65	40.97
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	29.16	14.34	43.50
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	14.86	45.46
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.63	40.41
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.04	11.74	32.78

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
201	Single Axle or Two Axle	30.00	15.00	45.00
203	Three or More Axle	16.00	7.35	23.35
204	Articulated, Euclid, Dumptr, Off Road Material Hauler	32.89	18.96	51.85
205	Pavement Marking Vehicle	16.00	7.35	23.35
207	Truck Mechanic	16.00	7.35	23.35

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
301	General Laborer Premium Increase(s): Add \$1.92 for bottomman; Add \$2.03 for concrete manhole builder, bracer, jointman, or pipelayer; Add \$4.83 for blaster. Add \$2.00 for all tunnel work under 15 lbs. compressed air; Add \$2.00 for 0-30 lbs. compressed air; Add \$3.00 for over 30 lbs. compressed air.	28.84	17.12	45.96
303	Landscaper	25.28	11.46	36.74
304	Flagperson or Traffic Control Person	17.41	10.10	27.51
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.69	15.50	33.19
314	Railroad Track Laborer	13.50	4.06	17.56

**HEAVY EQUIPMENT OPERATORS
SEWER, WATER OR TUNNEL WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
521	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Master Mechanic; Pile Driver. Future Increase(s): Add \$1.05/hr on 6/2/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Add \$.25/hr for operating tower crane.	36.84	19.45	56.29
522	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader & Distributor; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Dredge (NOT Performing Work on the Great Lakes); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type). Future Increase(s): Add \$1.05/hr on 6/2/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Add \$.25/hr for operating tower crane.	36.06	19.45	55.51
523	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Boring Machine (Horizontal or Vertical); Bulldozer or Endloader (Over 40 hp); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Manhoist; Material or Stack Hoist; Mechanic or Welder; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add \$1.05/hr on 6/2/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Add \$.25/hr for operating tower crane.	35.11	19.45	54.56

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames. Future Increase(s): Add \$1.05/hr on 6/2/2014; Add \$1.55/hr on 6/1/2015. Premium Increase(s): Add \$.25/hr for operating tower crane.	35.11	19.45	54.56
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	30.19	20.94	51.13
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	30.44	19.10	49.54
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	38.80	18.98	57.78
528	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	38.80	18.98	57.78
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	34.50	18.98	53.48
530	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under), Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	34.50	18.98	53.48

AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION

Includes all airport projects (excluding buildings) and all projects awarded by the Wisconsin Department of Transportation (excluding buildings).

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	35.80	16.87	52.67
105	Carpenter Future Increase(s): Add \$1.25/hr on 6/2/2014. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.68	19.81	53.49
107	Cement Finisher Future Increase(s): Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	31.56	18.53	50.09
109	Electrician Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.82	22.61	55.43
111	Fence Erector	16.00	3.33	19.33
116	Ironworker	30.51	23.23	53.74
118	Line Constructor (Electrical)	38.25	17.63	55.88
124	Painter	21.87	11.37	33.24
125	Pavement Marking Operator	30.00	0.00	30.00
126	Piledriver	27.67	25.64	53.31
133	Roofer or Waterproofer	29.40	15.55	44.95
137	Teledata Technician or Installer	24.75	16.08	40.83
143	Tuckpointer, Caulker or Cleaner	34.57	16.42	50.99
144	Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	15.07	45.67
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.58	40.36
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.04	11.74	32.78

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
201	Single Axle or Two Axle	34.22	19.90	54.12
203	Three or More Axle	25.24	15.20	40.44
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.75/hr on 6/1/14; Add \$1.25/hr on 6/1/15; Add \$1.30/hr on 6/1/16; Add \$1.25/hr on 6/1/17. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm .	29.27	20.40	49.67
205	Pavement Marking Vehicle	25.24	15.20	40.44
206	Shadow or Pilot Vehicle	34.22	19.90	54.12
207	Truck Mechanic	25.24	15.20	40.44

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Future Increase(s): Add \$1.60/hr on 6/1/2014. Premium Increase(s): Add \$.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.50/hr for line and grade specialist; Add \$.65/hr for blaster and powderman; Add \$2.01/hr for topman; Add \$2.46/hr for bottomman; Add \$3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	26.06	19.43	45.49
302	Asbestos Abatement Worker	19.00	0.00	19.00
303	Landscaper Future Increase(s): Add \$1.60/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	26.06	19.43	45.49
304	Flagperson or Traffic Control Person Future Increase(s): Add \$1.60/hr on 6/1/2014. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	22.55	19.43	41.98

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.69	15.50	33.19
314	Railroad Track Laborer	13.50	4.06	17.56

**HEAVY EQUIPMENT OPERATORS
AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION**

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
531	Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm .	36.72	20.40	57.12
532	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm .	36.22	20.40	56.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
533	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm.</p>	35.72	20.40	56.12

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
534	<p>Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm.</p>	35.46	20.40	55.86
535	<p>Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm.</p>	35.17	20.40	55.57
536	Fiber Optic Cable Equipment.	26.69	16.65	43.34
537	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	38.80	18.98	57.78
538	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	38.80	18.98	57.78

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
539	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	34.50	18.98	53.48
540	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY.	34.50	18.98	53.48

LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION
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Includes roads, streets, alleys, trails, bridges, paths, racetracks, parking lots and driveways (except residential or agricultural), public sidewalks or other similar projects (excluding projects awarded by the Wisconsin Department of Transportation).

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	35.80	16.87	52.67
105	Carpenter	32.93	19.99	52.92
107	Cement Finisher	30.09	17.53	47.62
109	Electrician	31.27	22.81	54.08
111	Fence Erector	16.00	3.33	19.33
116	Ironworker	30.51	22.97	53.48
118	Line Constructor (Electrical)	38.25	17.63	55.88
124	Painter	29.52	18.84	48.36
125	Pavement Marking Operator	30.00	0.00	30.00
126	Piledriver	29.06	25.46	54.52
133	Roofer or Waterproofer	29.40	15.55	44.95
137	Teledata Technician or Installer	24.75	16.08	40.83
143	Tuckpointer, Caulker or Cleaner	34.57	16.42	50.99
144	Underwater Diver (Except on Great Lakes)	38.80	18.98	57.78
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	14.86	45.46
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.63	40.41
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.04	11.74	32.78

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
201	Single Axle or Two Axle	30.00	15.00	45.00

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
203	Three or More Axle	18.00	0.00	18.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler	32.89	18.96	51.85
205	Pavement Marking Vehicle	18.00	0.00	18.00
206	Shadow or Pilot Vehicle	30.00	15.00	45.00
207	Truck Mechanic	18.00	0.00	18.00

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer	23.07	18.07	41.14
303	Landscaper Future Increase(s): Add \$1.60/hr on 6/1/14. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	29.04	14.63	43.67
304	Flagperson or Traffic Control Person	17.41	10.10	27.51
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.69	15.50	33.19
314	Railroad Track Laborer	13.50	4.06	17.56

**HEAVY EQUIPMENT OPERATORS
CONCRETE PAVEMENT OR BRIDGE WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
541	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm .	36.72	20.40	57.12
542	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Crane, Tower Crane Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm .	36.22	20.40	56.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
543	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtml.</p>	35.72	20.40	56.12
544	<p>Backfiller; Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine.</p>	33.96	19.79	53.75
545	<p>Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oilier; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.</p>	30.32	18.46	48.78
546	Fiber Optic Cable Equipment.	26.69	16.65	43.34

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	38.80	18.98	57.78
548	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	38.80	18.98	57.78
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	34.50	18.98	53.48
550	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	34.50	18.98	53.48

**HEAVY EQUIPMENT OPERATORS
ASPHALT PAVEMENT OR OTHER WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
551	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	39.16	19.10	58.26
552	Backhoe (Track Type) Having a Mfrgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity Of 4,000 Lbs. & Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm .	36.22	20.40	56.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
553	<p>Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type) Having a Mfr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Laser/Screed; Concrete Slipform Placer Curb & Gutter Machine; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p>	35.17	20.05	55.22
554	<p>Backfiller; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self-Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p>	35.17	20.05	55.22

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
555	<p>Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.</p> <p>Future Increase(s): Add \$1.75/hr on 6/1/2014; Add \$1.25/hr on 6/1/2015; Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm.</p>	35.17	20.40	55.57
556	Fiber Optic Cable Equipment.	26.69	16.65	43.34

RESIDENTIAL OR AGRICULTURAL CONSTRUCTION

Includes single family houses or apartment buildings of no more than four (4) stories in height and all buildings, structures or facilities that are primarily used for agricultural or farming purposes, excluding commercial buildings. For classification purposes, the exterior height of a residential building, in terms of stories, is the primary consideration. All incidental items such as site work, driveways, parking lots, private sidewalks, private septic systems or sewer and water laterals connected to a public system and swimming pools are included within this definition. Residential buildings of five (5) stories and above are NOT included within this definition.

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
101	Acoustic Ceiling Tile Installer Future Increase(s): Add \$1.25/hr on 6/2/2014.	33.68	19.81	53.49
102	Boilermaker	26.00	4.73	30.73
103	Bricklayer, Blocklayer or Stonemason	23.74	8.31	32.05
104	Cabinet Installer	25.00	0.00	25.00
105	Carpenter	21.00	15.34	36.34
106	Carpet Layer or Soft Floor Coverer	13.00	0.00	13.00
107	Cement Finisher	23.50	13.19	36.69
108	Drywall Taper or Finisher	25.00	5.00	30.00
109	Electrician	25.00	2.43	27.43
110	Elevator Constructor	43.21	26.06	69.27
111	Fence Erector	18.00	1.38	19.38
112	Fire Sprinkler Fitter	52.82	5.54	58.36
113	Glazier	37.13	12.29	49.42
114	Heat or Frost Insulator	30.00	0.00	30.00
115	Insulator (Batt or Blown)	17.00	0.50	17.50
116	Ironworker	31.25	19.46	50.71
117	Lather	21.00	15.34	36.34
119	Marble Finisher	26.89	19.18	46.07
120	Marble Mason	23.74	8.31	32.05
121	Metal Building Erector	17.00	3.82	20.82
123	Overhead Door Installer	19.00	0.13	19.13
124	Painter	29.52	2.52	32.04

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
125	Pavement Marking Operator	30.00	0.00	30.00
129	Plasterer	22.00	0.00	22.00
130	Plumber	37.97	19.84	57.81
132	Refrigeration Mechanic	19.75	8.83	28.58
133	Roofer or Waterproofer	29.40	16.35	45.75
134	Sheet Metal Worker	25.92	13.12	39.04
135	Steamfitter	31.72	16.10	47.82
137	Teledata Technician or Installer	24.75	10.87	35.62
138	Temperature Control Installer	18.00	0.50	18.50
139	Terrazzo Finisher	26.89	19.18	46.07
140	Terrazzo Mechanic	30.20	18.42	48.62
141	Tile Finisher	23.77	16.50	40.27
142	Tile Setter	30.00	0.00	30.00
143	Tuckpointer, Caulker or Cleaner	28.00	0.00	28.00
146	Well Driller or Pump Installer	27.60	0.00	27.60
147	Siding Installer	16.00	0.62	16.62

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
201	Single Axle or Two Axle	17.25	4.56	21.81
203	Three or More Axle	23.17	13.32	36.49
205	Pavement Marking Vehicle	23.17	13.32	36.49
207	Truck Mechanic	19.00	1.85	20.85

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
301	General Laborer	18.00	10.64	28.64
302	Asbestos Abatement Worker	17.00	3.86	20.86

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
303	Landscaper	14.20	1.37	15.57
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.69	15.50	33.19
315	Final Construction Clean-Up Worker	28.32	16.11	44.43

**HEAVY EQUIPMENT OPERATORS
RESIDENTIAL OR AGRICULTURAL CONSTRUCTION**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
557	Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type); Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Crane, Shovel, Dragline, Clamshells; Forestry Equipment, Timberco, Tree Shear, Tub Grinder, Processor; Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type); Winches & A-Frames.	22.00	6.89	28.89
558	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Backfiller; Belting, Burlap, Texturing Machine; Boiler (Temporary Heat); Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Jeep Digger; Lift Slab Machine; Mulcher; Oiler; Post Hole Digger or Driver; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Roller (Rubber Tire, 5 Tons or Under); Screed (Milling Machine); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Stump Chipper; Telehandler; Vibratory Hammer or Extractor, Power Pack.	16.15	1.93	18.08

***** END OF RATES *****

SECTION 00 83 00 - PARTIAL PAYMENTS FOR STORED MATERIALS

PART 1 – GENERAL

- 1.1 As stated in the General Conditions, the Commissioner of Public Works may grant an estimate of the amount of properly stored fabricated or manufactured materials and components specified, previously paid for by the Contractor. Said payments will be made in accordance with "Procedure Rules of the Commissioner of Public Works for Progress Estimates".
- 1.2 For inspection of properly stored materials located outside Milwaukee County, the City shall be reimbursed by the Contractor for all transportation costs, travel time wages, meals and lodging, overtime and incidental expenses for City employees performing said inspection.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 83 00

SECTION 01 11 00 – SUMMARY OF WORK

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. The Contractor for this work shall refer to the “General Specifications” of the Department of Public Works dated January 31, 1992 and all subsequent addenda, as he shall be held responsible for all requirements listed herein. The Contractor shall visit the site, consult the drawings and specifications, be familiar with the project, and determine for himself all conditions affecting the work.
- B. Failure by a Contractor to be familiar with the project shall not release him from any obligation undertaken under the contract to complete the work in strict conformity with the plans and specifications and all City, State or Federal codes or regulations pertaining thereto.
- C. The State of Wisconsin Department of Transportation, Division of Highways, Standard Specifications for Highway and Structure Construction – 2014 Edition Part 2 through Part 7, and Part 1 specifically referenced herein, revised by these specifications and included in the special provisions.
- D. The drawings accompanying these specifications illustrate the nature and intent of the work and with the specifications form a part of the contract documents. Wherever the clauses “as shown”, “as directed” or similar expressions are used, it shall be understood that reference to drawings is made.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. It is understood that the submittal of a proposal shall include all labor, materials, equipment and incidentals necessary for completion of the work required, including that which may not be directly shown on the drawings or in the specifications but are necessary for proper operation and approval.
- B. The contractor shall locate and be responsible for all lines, elevations and measurements of the structure and other work executed by the Contractor under the contract. The Contractor must exercise proper precaution to verify areas to be worked on the drawing before laying out work and will be held responsible for any error resulting from failure to exercise such precaution.
- C. Contractor shall verify grades, lines, levels, locations and dimensions as shown on drawings and report any errors or inconsistencies to the Engineer before commencing work or fabrication of materials. Starting of work by the Contractor shall imply acceptance of existing conditions.

1.3 DEFINITIONS

- A. The word provide, when used in this specification shall mean that the provider shall furnish and install complete the referenced item or items.

1.4 DESCRIPTION OF PROJECT

- A. This project involves furnishing and installing, complete in every detail, and every aspect whether specified or not, all demolition, all poured-in-place concrete, reinforcing steel, piles, mechanically stabilized earth retaining walls, pavement markings, traffic control, landscaping, and additional work as detailed in the contract drawings and specifications required for the completion of the West Lisbon Avenue Bridge, Retaining Walls and Approaches.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 HOURS OF WORK

- A. The contractor shall coordinate hours of work with the City of Milwaukee.
- B. The hours of work shall be between 7:00 AM and 9:00 PM.

3.2 EXAMINATION OF SITE

- A. All existing conditions, elevations and dimensions shall be verified at the site by the Contractor. Prior to submitting his proposal, the Contractor shall visit the site, consult the drawings and specifications and determine for himself all conditions affecting the work.
- B. Contractor shall become acquainted with the location of concealed services, utilities, structures, overhead conduits and piping, etc. which may be encountered or be affected by the Contractor's work, and shall be responsible for any damage caused by neglect to provide proper precautions or protection.
- C. Information pertaining to existing conditions that appear on the drawings is based on original construction. While such data has been collected with reasonable care, there is no expressed or implied guarantee that conditions so indicated are entirely representative of those actually existing or that unforeseen developments may not occur. They are merely provided to assist the Contractor in the investigation of conditions.
- D. Contractor shall obtain complete data at the site and inspect the area that is to receive the work before proceeding with fabricating, assembling, fitting, or erecting his work.
- E. Contractor shall notify the Engineer in case of discrepancies between existing work and drawings, and defects in such surfaces that are to receive the Contractor's work. The Engineer will direct such work or surfaces to be remedied.
- F. Damage to the structure not documented prior to the rehabilitation work will be the Contractor's responsibility to repair.

3.3 SUPERVISION OF WORK

- A. The Contractor shall provide all necessary supervision, scheduling, planning and control to perform the work and coordinate the work of all trades on the project.
- B. The contractor shall furnish the services of an experienced superintendant at all times when work is being performed.
- C. The superintendant shall be constantly in charge of the installation of the work together with all subcontractors, skilled workman, helpers, and labor required to perform the work.
- D. The Contractor shall be thoroughly acquainted with and be responsible for the various Subcontractors' work so that it is properly coordinated and supervised to the satisfaction of the Commissioner of Public Works or his representative.
- E. Upon written notice to the Contractor of the lack of such coordination and supervision, the Commissioner of Public Works may authorize such services as may be required and deduct the cost of this service at an hourly rate of \$100.00 per hour per person from the contract for the work.

3.4 STORAGE OF MATERIALS

- A. The contractor shall assume full responsibility for the protection and safekeeping of products stored on the premises.
- B. The contractor shall store materials within the confines of his work space or in other areas or locations negotiated by the Contractor.
- C. Materials are to be so stored as to assure the preservation of their quality and fitness for the work. When considered necessary, materials shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Materials stored at the site shall not damage the structure in any way. Oil, grease, or gasoline spills shall be cleaned up immediately.
- D. Stored materials shall be located so as to facilitate prompt inspection.

3.5 PROTECTION AND REPAIRS

- A. The Contractor shall continuously maintain adequate protection of all his work and materials, whether worked or unworked, on or off the site of the project, and shall protect the work and materials of all other Contractors and the City of Milwaukee's property from damage arising in connection with their contracts.
- B. The Contractor shall be responsible for any damages caused by his operations to vehicles, landscaping, persons or property. The contractor, during all operations shall take precautions necessary for the full protection of traffic, parked vehicles, property upon and in the vicinity of the structures and utilities.
- C. Whenever damage or destruction of property of any character resulting from neglect, misconduct or omission due to the manner or method of execution or non-execution of the work or caused by

defective work or the use of improper materials, the Contractor shall be held responsible and not released until the work shall have been corrected, completed, and the requirements and intent of these documents complied with.

- D. All damages of each and every kind resulting from neglect or refusal of the Contractor to protect such work materials, and property during erection, construction and completion of the project shall be made good by the Contractor to the satisfaction of the City.
- E. No damaged or imperfect materials, equipment accessories, etc., will be accepted. All materials, equipment, accessories, etc. furnished or installed by this Contractor must function perfectly and as designed. If any argument should arise in regard to this requirement, the City will replace the parts and deduct the costs from the contract price.
- F. The Contractor shall repair all damages that he, any of his employees or his subcontractors may do to any other work or any other parts of the bridge structure. Repairs must be done in a neat and workmanlike manner to match existing construction and must meet with the approval of the Commissioner of Public Works or his representative.
- G. If any faults are found with the Contractor's work, he shall repair or replace any of the parts he has furnished or installed as directed without any additional costs to the City.
- H. The Contractor shall restore, repair, refinish or replace, as part of this contract any surfaces that are damaged or left incomplete or unsightly as a result of the removal of existing equipment.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 11 00

SECTION 01 22 00 – UNIT PRICES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Cleaning and Project Closeout, and other Division 1 Specifications Sections apply to this section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services.

1.4 EXTRA WORK

- A. Extra work shall be performed in accordance with the Department of Public Works General Specifications Section 2.6.0 “Extra Work and Credits”

1.5 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, labor, insurance, overhead, profit, and applicable taxes.
- B. Measurement and Payment:
 - 1. All work completed under the contract will be measured by the Engineer according to United States standard measure. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.
 - 2. The completed work will be measured for final payment by the Engineer, as specified for the various items elsewhere in these specifications, to determine the quantities of such items of work performed, except when agreements have been made providing for compensation on the basis of plan quantities as hereinafter provided or when contract change orders have been executed providing for other methods of measurement. The Contractor will be paid for the actual amount of work performed in accordance with the contract, as shown by the final measurements or upon the basis of plan quantities.
 - 3. If the Contractor and the Engineer agree in writing that the quantities of certain items or portions of items of work as set forth in the contract or on the plans, as originally drawn or

subsequently corrected or revised, are in substantial agreement with the actual quantities of work performed, compensation therefore will be made based on the quantities set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, without measurement thereof, and the contractor shall accept such compensation as full payment for such items or portions of items.

4. When standard manufactured items are specified such as fences, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section, dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
- C. The items listed in the bid documents shall be considered as sufficient to complete the work in accordance with the plans and specifications. Any portion of the work not listed in the bid form shall be deemed to be a part of the item which it is most closely associated with and shall be included in the cost of the unit shown on the bid form. Payment for the unit shown on the bid form shall be considered to cover the cost of all labor, material, equipment and performing all operations necessary to complete the work in place. The unit of measurement shall be the unit shown on the bid form. Payment shall be based upon the actual quantity multiplied by the unit prices. Where work is to be performed at a lump sum price, the lump sum shall include all operations and elements necessary to complete the work. No payment will be made for any material wasted, unused, rejected, or used for the convenience of the Contractor.
 - D. Quantities and measurement of work completed shall be agreed to by both the Contractor and Project Inspector prior to submission of progress payment(s).
 - E. The Owner reserves the right to add or remove quantities of work from the project after the project is awarded.
 - F. Final payment and release of retainage will be processed following final acceptance by the Engineer. Payment will only be released once all contract requirements are fulfilled and punch-list items are marked as acceptably completed. Punch-list work is incidental to the project quantities.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 22 00

SECTION 01 26 00 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, special provisions, and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. The engineer will issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the contract sum or contract time.

1.4 CHANGE ORDERS

- A. Change orders shall be requested and processed in accordance with Department of Public Works General Specifications, Chapter 2.1.26 and as herein specified.
- B. The Contractor shall submit all change order requests to the City in a timely manner. Each request should include a description of the proposed change, the reason for the change, and a complete breakdown of the proposed cost including supporting information to substantiate the claim.
- C. The Contractor shall include with the change order request the impact, if any, the proposed change will have on the Contractor's schedule. If a time extension to the schedule is requested, then the Contractor shall include supporting information to substantiate the claim.
- D. All change order requests shall be submitted as soon as possible after the above information can be compiled. Change order requests submitted after one month of occurrence may not be granted.
- E. Change orders requested to be paid on a time and material basis shall have all work documented on a daily basis. Contractor's superintendent and the Project Inspector shall sign off on a daily basis all labor hours and materials used and charged to the change orders.

- F. Approval of the change order work and method and/or amount of payment shall be approved prior to Contractor proceeding with change order as outlined in the Department of Public Works General Specification.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 26 00

SECTION 01 31 13 – PROJECT COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. The General Contractor shall assume and take responsible charge of the project and shall coordinate the work of each Subcontractor so as to complete the project in an orderly and timely manner.
- B. Each Contractor shall:
 - 1. Coordinate the work of his own employees
 - 2. Expedite his work to assure compliance with schedules.
 - 3. Coordinate the work with that of other Contractors and City of Milwaukee.

1.3 SPECIAL REQUIREMENTS

- A. The required time of completion.
 - 1. The Contractor shall complete all work within 120 Working Days.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 COORDINATION PROCEDURES

- A. Cooperate with the City and other persons of all trades engaged in the work in such a manner and to such extent as will best facilitate the work of each and the prompt completion of the work.
- B. Maintain progress of the work, order materials and let subcontracts promptly, and schedule and expedite work so as to avoid delay.
- C. Notify other Contractors, trades and City of Milwaukee whose work is in any way connected to, combined with, or influenced by the Contractor's work and allow them reasonable time to complete their work.
- D. Carefully examine the drawings and specifications to ascertain the extent of the work of all trades.

- E. Coordinate access to and use of the site, and storage of materials on the site with the subcontractors.
- F. Coordinate Contractor's work with adjacent work and cooperate with all other trades so as to facilitate the general progress of the project. Afford all other trades every reasonable opportunity for the installation of their work and for the storage of their material. In no case exclude from the premises or work, any other Contractor or Subcontractor or their employees; nor interfere with any Contractor or Subcontractor in the execution or installation of his work.
- G. Perform work in proper sequence in relation to that of other trades. Pay all costs caused by defective or ill-timed work.
- H. Arrange work and dispose of materials so as not to interfere with the work or storage of materials of other Contractors and join his work to that of others in accordance with the intent of the drawings, special provisions, and specifications.
- I. Notify the City of unforeseen conditions found in the field.

3.2 EXAMINATION OF DRAWINGS

- A. Examine all drawings together with the specifications, or special provisions applicable to the contract.
- B. After examination of the contract documents, bring to the attention of the City any questions with regard to the intent of these documents, in a timely manner, prior to commencing with the work.

PART 4 - MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 31 13

SECTION 01 31 19 – PROJECT MEETINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for project conferences and meetings, including, but not limited to, the following:
 - 1. Pre-Construction Conference
 - 2. Pre-Pour Meetings
 - 3. Progress Meetings
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division 1 Section 01 31 13 "Project Coordination" for procedures for coordinating project meetings with other construction activities.
 - 2. Division 1 Section 01 33 01 "Submittals/Permits" for submitting the contractor's construction schedule.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION CONFERENCE

- A. Soon after award of contract and prior to the start of construction, the Contractor shall attend a Pre Construction Conference with representatives of the City.
- B. The Contractor shall have at the conference responsible representatives from subcontractors who are to furnish the required materials and perform work on the project.
- C. The purpose of the conference is to discuss in detail the plans and specifications. The discussion shall include but is not limited to:
 - 1. Schedule
 - 2. Equipment
 - 3. Material storage
 - 4. Inspection requirements

5. Inspection reports
 6. Protection procedures for the structure adjacent facilities, environment, and personnel
- D. The Contractor shall submit the construction schedule to the Engineer at this conference. It must include all of the Contractor's work and all the work of subcontractors. Copies of this schedule shall be submitted to the City for review. The schedule shall include the following:
1. List of starting and completion dates for each major item
 2. Running schedule of a week-by-week charting and allowing for charting of:
 - a. Expected progress on major items
 - b. Actual progress on major items
 - c. Critical path items
- E. Contractor shall describe in detail when each portion of the work is to be accomplished and subcontractors shall participate in the discussion. The Engineer will serve to interpret the contract documents should such questions arise.
- F. Any other questions that the Contractor/Subcontractors have about the work or its scheduling shall be raised at this conference.
- G. Requirements for contract administration and construction operations will be defined for participants.
- H. Time, date and place of the conference will be determined by the Engineer.

3.2 PROGRESS MEETINGS

- A. Weekly progress meetings will be held at the project site by the City's representative for the purpose of coordinating and expediting the work progress.
- B. Attendance at progress meetings by the Contractor is mandatory. These meetings shall also be attended by representatives of each Subcontractor who is either working at the site or is affected by work being done at the site.
- C. Contractors shall give written reports of progress on the project, discuss the work schedule for the coming period and present all conflicts, discrepancies, or other difficulties for resolution.
- D. The Contractor shall submit an updated construction schedule at each progress meeting with the expected progress of major items, actual progress on major items and critical path items outlined. A short narrative should be written describing the cause of any delays and intended action to remedy delays. On a monthly basis, provide an overall project schedule tracking the actual progress of major and critical path items, expected progress of remaining major and critical path items, and anticipated completion date.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

01 31 19/3

END OF SECTION 01 31 19

SECTION 01 33 01 – SUBMITTALS AND PERMITS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, special provisions, and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for submittals and permits required for performance of the work.
- B. The rulings, regulations and laws of the following shall be complied with in the completion of this project.
 - 1. United States Department of Labor – Occupational Safety and Health Administration (OSHA)
 - 2. Wisconsin Department of Workforce Development
 - 3. City of Milwaukee Building Code
 - 4. Wisconsin Administrative Code
 - 5. Ordinances of the City of Milwaukee
 - 6. National Electrical Code
 - 7. American Association of State and Highway Transportation Officials (AASHTO)
 - 8. Federal Navigation Regulations including U.S. Coast Guard Regulations

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SUBMITTALS AND SAMPLES

- A. Comply with the requirements of the Department of Public Works General Conditions and as follows:
 - 1. Forward submittals not more than 30 calendar days after the Award of Contract for all materials to be used on the project. No work, indicated on any one shop drawing, hardware list, etc., shall be started until such information has been approved.
 - 2. Include with each submittal a transmittal letter signed by the Contractor containing the following:
 - a. Name of Contractor
 - b. Name of Project
 - c. List of Submittals with Specification Section references
 - d. Name of Manufacturer or Supplier
 - e. Additional information as required for the items being provided.

3. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
4. Processing: No specific time periods are established herein for submittals or for the engineers review. To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow up to 21 days for initial review. Allow additional time if the Engineer must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow up to 21 days for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.
5. Questions on the plans and project specifications during the contract bidding phase should be directed to:

Mr. Alak Roy
Civil Engineer
Infrastructure Services Division
Room 907, Frank P. Zeidler Municipal Building
841 North Broadway
Milwaukee, WI 53202
(414) 286-0451
Alak.Roy@milwaukee.gov

All correspondence including submittals, payment requests (4 copies), change order proposals, construction time letters (delays, suspensions), and any construction related matters shall be addressed as follows:

Construction Supervisor (To be determined)
Infrastructure Services Division
Room 701, Frank P. Zeidler Municipal Building
841 North Broadway
Milwaukee, WI 53202

Note: A specific Construction Supervisor will be assigned to the project prior to the start of construction and contact information will be shared at the preconstruction conference.

All correspondence concerning the following items; Small Business Enterprise program Reports, Residency Preference Program, Apprentice Program, Wage and Hour Reports, Insurance Certificates, Subcontractor Approval Forms, and all affidavits should be sent to:

Ms. Barbara A. Tribble
Department of Public Works
Room 507, Frank P. Zeidler Municipal Building
841 North Broadway
Milwaukee, WI 53202
(414) 286-3309
Barbara.Tribble@milwaukee.gov

- B. Approvals: Wherever the words “or equal” or “approved equal” or similar terms are used, it shall mean as approved by the Commissioner of Public Works or agent. All shop drawings, bulletins, manufacturer’s cut sheets and data necessary for an approval shall be submitted with four (4) copies sent to the City Engineer. Three (3) copies are required for the City’s use, and one (1) copy will be returned to the Contractor.
- C. Approval shall apply to general conformance only, and shall in no way relieve this Contractor from his/her responsibility for the full performance of contract.

3.2 CODES AND PERMITS

- A. The contractor shall obtain and pay for all permits, charges, fees and licenses, if any are necessary for the prosecution of the work.
- B. The contractor shall comply with all laws, ordinances, rules and regulations bearing in the conduct of the work including the giving of notices.
- C. The cost of special equipment, enclosures, protective coverings, etc., as may be required to comply with codes and ordinances shall be included in the appropriate price bid for the work.
- D. If any material or work is specified contrary to such rules or omitted from the specifications or drawings but required by such rules, it shall be altered as required by the contractor to meet these rules and regulations.
- E. Attention is directed to the Milwaukee County Air Pollution Control Ordinances and the Department of Natural Resources relative to the specific sections which are applicable to sandblasting and spray painting.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 33 01

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities may include, but are not limited to, the following:
 - 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Temporary heat
 - 4. Ventilation
 - 5. Telephone service
- C. Support facilities may include, but are not limited to, the following:
 - 1. Temporary enclosures
 - 2. Hoists and scaffolding
 - 3. Temporary project identification signs and bulletin boards
 - 4. Waste disposal services
 - 5. Construction aids and miscellaneous services and facilities
- D. Security and protection facilities may include, but are not limited to, the following:
 - 1. Barricades, warning signs, and lights
 - 2. Enclosure fence for the site
 - 3. Environmental protection

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 TEMPORARY OR TRIAL USAGE

- A. The owner shall have the right to make temporary or trial usage of any mechanical device, machinery, apparatus, equipment, work, material, or construction supplied under contract before final completion or acceptance of the work, and the same shall not be construed as evidence of acceptance of the work by the owner.

3.2 TEMPORARY POWER

- A. The Contractor shall provide all power required, and be responsible for payment for all utility bills beginning at the start date for the duration of the project.
 - 1. OSHA regulations require that employers use either ground fault circuit interrupters or an assured equipment grounding conductor program in addition to any other regulation or equipment ground connectors.

3.3 TEMPORARY LIGHTING

- A. Temporary lighting shall be provided and maintained by the Contractor.
- B. Furnish, install, and maintain temporary lighting during construction.
 - 1. Lighting shall be sufficient to enable all trades to complete their work. Illumination in all areas shall meet or exceed State Code requirements. (See IND 35.38). Provide at least one 200 watt lamp for each 400 square feet of floor space.
 - 2. Remove the temporary lighting when the job is completed.

3.4 BULLETIN BOARD

- A. Furnish and maintain a 4-feet 0-inch by 4-feet 0-inch bulletin board for the posting of wage employment data, etc.

3.5 FIELD OFFICE

- A. The location of a field office shall be coordinated with the City of Milwaukee for the West Lisbon Avenue Bridge, Retaining Walls and Approaches.

PART 4—MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 50 00

SECTION 01 60 01 – MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 MATERIALS

- A. Furnish materials of the type, qualities and characteristics specified. The specification of a trade name and catalog number is intended to establish quality, type, character and operating characteristics of the material required. Materials by other manufacturer's meeting the approval of the Engineer of equal specifications will be considered excepting as may be specifically stated otherwise. Evaluating of other manufacturer's products will be made at the time of shop drawing submission. Samples and/or demonstrations may be requested.
- B. Materials and equipment shall be delivered adequately protected, in merchantable condition and in original unbroken packages if normally packaged. They shall be stored and handled so as to protect and maintain their merchantable condition. Packages shall have stamped on them the date of manufacture and shelf life, if applicable.
- C. The Commissioner of Public Works or his representative shall have the right to reject material not in compliance with specifications as well as damaged material and the Contractor shall remove such material from the construction site when as directed.

1.2 MATERIAL STORAGE

- A. Storage areas are available within the Contractor's occupancy limits.
- B. Refer to Section 01 11 00 Summary of Work, Storage of Materials.

1.3 EQUIPMENT

- A. Internal combustion engine and compressors shall be equipped with mufflers to reduce noise to a minimum, and shall not be operated in enclosed areas without adequate ventilation.
- B. All materials and work procedures used shall be in accordance with all air pollution control regulations in effect at the work site.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

PART 4 - MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 60 01

SECTION 01 70 01 – CLEANING AND PROJECT CLOSE-OUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, special provisions, and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.
- B. Article 2.5.4 of the General Specifications of the City of Milwaukee Department of Public Works shall be supplemented as specified hereafter.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for cleaning and project closeout including, but not limited to, the following:
 - 1. Project record document submittal
 - 2. Submittal of warranties
 - 3. Final cleaning

1.3 AS-BUILT DRAWINGS

- A. At the completion of work and prior to final payment, the contractor shall provide the City with a marked up set of “as-built” drawings showing all changes or variations from contract drawings, including those specified on change order drawings heretofore issued. Contractors providing buried or concealed piping, conduit or similar items shall locate such items by dimensions and elevations.
- B. Marked up sets of prints will be acceptable providing they are in first class condition for record purposes. Each contractor shall be responsible for accuracy of record drawings.

1.4 GUARANTEE

- A. The Contractor shall guarantee to replace or repair promptly at his own expense, as directed by the Commissioner of Public Works or his agent, all workmanship, materials, or equipment in which defects may develop within a minimum one (1) year warranty period from the date of final acceptance of his work excepting as may be hereinafter specified. This guarantee includes all damage done by the City due to faulty equipment, poor installation or poor construction caused by the Contractor. The City shall also receive any extended guarantees or warranties normally supplied by any vendor or manufacturer for material or equipment incorporated in the work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SAFETY CLEANING

- A. Safety cleaning: Each Contractor is responsible for safety cleaning, which includes but is not limited to the following:

1. Work areas, passageways, stairs, must be kept free of debris and scrap.
2. Form and scrap lumber shall have nails withdrawn or bent over and lumber shall be stacked or removed.
3. Spills of paint, oil, grease, or other liquids shall be removed immediately.

3.2 PROGRESS CLEANING

- A. Prime Contractor and subcontractor shall remove his rubbish and debris from the site promptly upon its accumulation.
- B. Combustible waste shall be stored in fire resistive containers and disposed of regularly.
- C. Oily, flammable or hazardous wastes such as caustics, acids, harmful dusts, etc., shall be stored in appropriate covered containers.
- D. The Contractor is not allowed to wash debris or other harmful contaminants into the Kinnickinnic River or down drains that would be discharged into City Sewers. Filters shall be inserted in the drain where it is likely debris may accumulate.

3.3 DISPOSAL

- A. All demolished materials required for this work shall be carefully collected and removed from site.
- B. No burning or rubbish or debris will be allowed at the site. No rubbish shall be thrown from heights without proper protection. When dust will be generated or flying debris is likely to occur, provide dust tight chutes or other means to control dust.
- C. Containers: Contractor shall provide mobile industrial type waste containers in the number and size required, placed at adequate locations to handle debris or provide other methods of disposing of debris.

3.4 FINAL CLEANING

- A. Complete final cleaning immediately prior to substantial completion.
- B. Contractors shall expedite or perform thorough cleaning, sweeping, and washing of work to remove from work area and equipment under his contract, all foreign matter, dust, debris, spots and soil, so as to put all such work and equipment including finishes, in a complete and finished condition ready for acceptance and use intended.
- C. Remove debris from drains and flush clean.

- D. Employ trained experienced workmen for the final cleaning.

3.5 CHARGES

- A. If Prime Contractors do not remove rubbish or clean the project site as specified above, the City reserves the right to have work done by others at Contractor's expense.
- B. Employees of the City who are required to clean up any rubbish will record all hours involved to complete such work.
- C. The cost incurred by the City for this special cleaning shall be charged against the contract price of the Contractor as determined by the City.

PART 4 - MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 70 01

SECTION 33 05 13.13 – CITY UNDERGROUND CONDUIT (CUC) MANHOLE ADJUSTMENT

PART 1 – GENERAL

This special provision describes adjusting the existing chimney of the block, precast, or brick round manholes; and furnishing, installing, and removing protection of the cables in the manholes during adjustment and paving operations. Perform work in accordance with the standard specifications, per *Standard Specifications for Sewer & Water Construction in Wisconsin*, as shown on the attached sketch, and as hereinafter specified.

PART 2 – PRODUCTS

Furnish and install materials that conform to the requirements of *Standard Specifications for Sewer & Water Construction in Wisconsin*. Salvage and re-install existing covers on the manholes. For manhole covers designated for replacement the city will supply the covers. Contact Rico Lopez, Inventory Clerk, at (414) 286-6123 prior to obtaining the frames and lids from the DPW Field Headquarters at 3850 North 35th Street. Contractor must have the "Castings Requisitions Form" which shall be supplied by the city to obtain the covers.

PART 3 – EXECUTION

Report any pre-existing problems to Ms. Karen Rogney, Conduit Section, at (414) 286-3243 three working in advance of any construction on manholes.

Before removing the pavement around the manhole, place a 3/4-inch plywood cover or equal over existing active Street Lighting, Traffic Control, Communication or private vendor electrical cables. This cover shall be properly supported to/at the manhole floor. Contractor must place a steel cover plate over the manhole which must remain in place during construction activities until the frame and cover are placed on the manhole.

Remove existing chimney to surface of concrete roof slab. If manhole does not have an existing concrete roof slab, remove sufficient chimney as to provide adequate corbel to fit new larger cast iron frame and cover.

Break out and remove pavement around manhole. Remove existing covers, storing and securing them properly. Any damaged, lost, or stolen covers shall be the responsibility of the contractor and shall be replaced at the contractor's expense.

Adjust manhole cover to proposed grade using brick or concrete rings as necessary. After paving is complete, remove all wedges and shims. Fill voids with grout. Do not back plaster inside walls. After completion of all paving operations, remove the temporary 3/4-inch plywood cover or equal which was placed over the existing electrical cables in the manhole as mentioned above. Remove all construction debris from the manhole.

PART 4 – MEASUREMENT AND PAYMENT

The unit of measurement for CUC manhole adjustment shall be Each. Note: CUC Manhole Adjustment shall include up to twelve (12) inches of adjustment. Payment shall be full compensation for furnishing all required materials, exclusive of frames, grates, or lids available and designated for adjusting; for removing, re-installing and adjusting the covers; and for furnishing all labor, tools, equipment, and incidentals necessary for adjusting each cover, complete in accordance to the requirements of the plans and contract. Covers to be adjusted and which were rendered unfit for use by the contractor, through the contractor's operations will be replaced by the contractor in kind at the contractor's own cost and expense.

END OF SECTION 33 05 13.13

SECTION 33 05 14 – INSTALLING CONDUIT INTO EXISTING ITEM

PART 1 – GENERAL

This special provision describes locating existing conduit system manholes and installing new conduit into those manholes at the locations shown on the plans. The contractor shall verify existing conduit manhole locations with the City of Milwaukee, and shall maintain any existing conductors, fibers, and conduit paths without interruption or damage. Repair and restoration of all disturbed areas resulting from the work shall be in accordance with the pertinent provisions of the standard specifications, and as hereinafter provided.

PART 2 – PRODUCTS

Conduit, as provided and paid for under other items in this contract. All materials shall conform to the pertinent provisions of the standard specifications unless otherwise noted.

PART 3 – EXECUTION

Carefully expose the outside of the existing structure without disturbing any existing conduits or cabling.

Drill the appropriate sized hole in a concrete structure or saw and remove full sections of block or bricks from the existing structure for the entering of conduit at a location within the structure that will not disturb the existing cabling and will not hinder the installation of new cabling within the installed conduit. This work may include the removal of the existing abandoned conduit from the structure to allow for the installation of the new conduits as indicated on the plans.

Fill any void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure.

Carefully tamp backfill into place.

All disturbed areas shall be repaired and restored in kind.

PART 4 – MEASUREMENT AND PAYMENT

The unit of measurement for Installing Conduit Into Existing Item shall be Each. Up to six conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of six, or conduits entering at significantly different entry points into the existing manhole will constitute multiple units. Payment is full compensation for drilling holes; removing blocks; removing bricks; removing abandoned conduit; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for disposal of surplus materials; for making inspections; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

END OF SECTION 33 05 14

SECTION 33 05 17 – 4-DUCT CONDUIT, CEMENT ENCASED, 4-INCH RIGID NONMETALLIC CONDUIT DB-60

PART 1 – GENERAL

This work consists of furnishing and installing cement encased multiple duct conduit below grade in accordance with the Standard Specifications, as shown on the plans and as follows.

PART 2 – PRODUCTS

- A. Conduit: The contractor shall furnish DB-60 polyvinyl chloride (PVC) conduit.

PVC conduit and fittings shall conform to the requirements of Standard Specifications for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

- B. Concrete: The type of concrete to be used to encase the ducts will be:

Class of Concrete	Type of Cement	Min. Cement Content Sacks per Cubic Yard	Sizes of Coarse Aggregate
G-1	Standard Portland Cement Type 1A or 1SA	4.0	Sharp Torpedo Sand only

- C. Slurry Backfill. Aggregate slurry backfill consists of No. 1 concrete aggregate Class 'C' concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

The material shall be mixed with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. The mix shall be deposited in the trench directly from a concrete transit mix truck.

- D. Pull Rope Pull rope specifications will be:

- Flat construction (7/16" to 5/8" wide)
- 100% woven aramid fiber (may include tracer wire)
- 1500 lbs. Minimum pull strength prelubricated
- sequential footage markings for location

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

PART 3 – EXECUTION

- A. Excavation: The excavation shall have the minimum or maximum dimensions shown on the plans and as follows:

No. of Ducts Wide	Minimum	Maximum
2	14 1/8"	16 5/8"
3	19 3/4"	22 1/4"
4	25 3/8"	27 7/8"

These minimum and maximum trench widths apply to standard 4 inch PVC electrical duct only. When required, the excavation may be widened for the handling and placing of materials.

Open-cut trenches shall be sheathed and braced as required by code and as necessary to maintain safety. The cost of furnishing, placing and removing of sheathing and bracing shall be included in the unit bid for the work.

The dimensions of the excavation will be governed by the number, configuration and the grade (cover) to which the conduit is to be installed as shown on the plan. The walls of the excavation shall be clean and true.

Previous to excavating trenches, the contractor shall expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. The exposed manhole and conduit shall be protected from damage.

The conduit shall be laid at a depth so that sufficient protection from damage is provided. Allowable covers shall be as follows:

The standard cover for mainline conduit is 39 inches and the minimum cover acceptable shall be 28 inches.

The standard cover shall be maintained wherever possible and any deviation less than the minimum may be allowed only with specific approval of the engineer.

The trench shall be graded so that it will have a minimum pitch of three inches per 100 feet. When an obstruction is encountered in the trench and it is necessary to excavate a deeper trench than would otherwise be required, in order to obtain drainage, refer the matter to the Inspector to determine whether the extra excavation should be made.

In grading a trench for mainline conduit, there are three general practices for direction of pitch.

1. When grading a trench in a street with a level grade, the high point of the trench bottom should ordinarily be centered between manholes and pitched downward equally toward each manhole.

2. Where the street slopes in one direction, locate the high point of the trench bottom approximately 30 feet from the end wall of the higher manhole and grade toward both manholes.
3. Where a steep grade is encountered, grade the trench at the minimum pitch from the end wall of the higher manhole to a point 20 feet plus or minus toward the lower manhole. From this point, follow the street grade at the standard cover to a point 20 feet plus or minimum away from the end wall of the lower manhole. From this point, the remainder of the section shall be laid at the normal pitch.

After the rough excavation is completed, the bottom of the trench shall be prepared to receive the conduit. The duct bed shall be brought to the final grade and graded uniformly from the high point to the low or drainage points. Stone chips or limestone screenings shall be used for grading the trench.

B. Placing of Duct

Placing of the duct is to proceed as soon as the duct bed has been completed. All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

The duct shall be placed (as shown on the detail) with the ends staggered so no two couplings are adjacent. This may be accomplished by the use of the short lengths in stock or cutting back full length sections to the desired lengths. If cut pieces are used, the cut end shall be placed at the manhole.

Full length pieces shall be used for the balance of the conduit line.

Formations of two ducts or more in height are to be carried forward in full formation, that is, as each tier of twenty foot lengths is laid, the next higher tier of ducts shall then be placed on the base spacers. These spacers shall be two feet from each duct end. The intermediate spacers and ducts shall be placed for the remaining tiers. Each length shall be glued into the adjoining coupling. A twist and push on the duct being placed will suffice for a water tight joint. Caution must be exercised in the driving operation, so that neither the coupling or duct will be split or damaged in any way. After the full formation has been completed, wood trench and duct bracing shall be placed on the ducts to prevent shifting or floating while the concrete envelope is being placed and during driving operation.

This procedure shall be followed with succeeding lengths, providing spacers (as shown on the detail) at the proper intervals, until sufficient trench footage of completed formation has been placed and is ready to receive concrete encasement.

The standard terminating point for mainline conduit will be the inside manhole wall. A standard end bell fitting shall be installed on all duct access points.

When the terminating point is not at a manhole but under pavement, an end cap shall be glued to the end of each duct. The grout encasement shall stop 4 inches from the end of the ducts leaving the ends exposed.

A #10 copper tracer wire shall be installed along and above the centerline of the duct for encasement in the concrete. The wire shall be 4 feet longer than the run of conduit and be at least 2 feet long at each access point.

A pull rope shall be installed in each run of conduit, as laid. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. The pull rope shall be anchored at each access point in a manner acceptable to the engineer.

- C. Concreting: After sufficient conduit has been laid and the trench and duct have been inspected, concreting is to begin. The minimum concrete encasement of the ducts shall be three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom (as shown on the detail). After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Concrete encasement shall be allowed sufficient time to set before backfilling is commenced.

- D. Backfilling: The backfilling of the conduit shall commence immediately after the duct has been inspected, approved and has had sufficient time to set to withstand the load.
 - 1. All trenches under pavement and/or concrete walk shall be backfilled with slurry.
 - 2. All trenches in grass areas shall be backfilled with the excavated material.

An aggregate slurry as specified shall be used to backfill the concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

PART 4 – MEASUREMENT AND PAYMENT

The item 4-Duct Conduit, Cement Encased, 4-Inch Rigid Non-Metallic Conduit DB-60, furnished and installed at the locations on the plans, will be measured by the linear foot. The measured quantity will equal the linear feet of encased duct, based on the distance along the centerline of duct between ends of conduit. Payment for the 4-Duct Conduit Cement Encased bid item is full compensation for providing the conduit, conduit bodies, and conduit fittings; for providing all conduit spacers used to support conduit; for pull ropes, trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections.

END OF SECTION 33 05 17

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for the West Lisbon Avenue Bridge, Retaining Walls and Approaches over the Canadian Pacific Railway, City of Milwaukee, Milwaukee County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2014 Edition, as published by the department, and these special provisions. The City considers only City and department standard specifications, supplemental specifications and interim supplemental specifications issued directly from the City as valid for this contract.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the City will pay for the work as bid in the US standard system.

The City of Milwaukee is referred as the City and the Wisconsin Department of Transportation is referred as the department in this specification.

2. Scope of Work.

The work under this contract shall consist of pavement removal, grading, concrete pavement, concrete curb and gutter, sidewalk, driveway approaches, pavement marking, landscaping, removal of existing structure P-40-884 except abutments, construction of Structures B-40-899, R-40-606, R-40-607, R-40-608, R-40-609, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

3. Prosecution and Progress.

Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the pre-construction conference. Upon approval, the engineer will issue the notice to proceed within 10 calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the City's scheduled resources.

Coordinate construction activities so that all work on this contract is completed by the project's completion date.

Note that access to the railroad right-of-way under the bridge is limited. Conduct an on-site visit prior to bidding to determine how to bring equipment, materials, and personnel to the work area for the prosecution on the bridge work.

The contractor will be responsible to find the staging area during construction by occupying the work area on the bridge, approaches or by negotiating with the adjacent property owners for the construction staging.

Notify the following personnel within the specified time period prior to commencing any construction operations:

- Obtain permission from the engineer a minimum of 48 hours prior to any construction schedule change.

Once work has started on the contract, work continually until the contract work is complete. The contract will not be considered complete until all items on the contract are completed, including sodding and roadway finishing. Obtain approval from the engineer at least 24-hours in advance if work on Saturday, Sunday or nationally recognized legal holidays is desired. Notify the engineers as soon as possible, but no later than 12:00 P.M. the day before of scheduling changes after approval has been obtained.

No extra cost will be allowed for "cold weather protection" as addressed in standard spec 415.3.13.

Maintain or provide where necessary, as directed by the engineer, pedestrian access to adjacent properties, businesses, and at bus stops. Provide adequate temporary sidewalk and bridging between the curb and right-of-way line over freshly paved concrete or other obstructions on the sidewalk area at entrances to building or as direct by the engineer. The cost of bridging shall be included in the unit bid price for Concrete Sidewalk, 5-Inch.

Maintain vehicular access to all business and commercial properties at all times except as noted in traffic control plans and specifications.

Inform property owners at least 48-hours prior to removing a driveway approach, which serves that property. Schedule sidewalk and driveway approach removal and replacement so that the time lapse between the removal and replacement is minimal.

Use equipment having vacuum or water-spray mechanisms to eliminate the dispersion of dust when performing roadway-cleaning operations. Provide suitable, self-contained particulate collectors, if vacuum equipment is used, to prevent discharge from collection bin into the atmosphere.

Migratory Birds

There is potential for bird nesting under the West Lisbon Avenue Bridge. The International Migratory Bird Act protects international migratory birds such as seagulls, swallows, and terns. The Department of Natural Resources recommends that the bridge be checked twice daily and empty nests be removed. It is a violation of federal law to disturb nests if eggs or fledgling young are present. Please contact Brian Nelson, United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services at (920) 324-4514 if eggs or fledgling young are present.

If swallow nests are present, do not remove or destroy them when the swallows are nesting or rearing their young. The nesting season for swallows has been established as May 1 through August 30. Apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy occupied nests during the nesting period. The need for a permit may be avoided by removing the existing bridge superstructure prior to nest occupation by swallows, and clearing the nests from and installing a suitable netting device on the remaining existing superstructure prior to nesting activity to prevent the swallows from nesting. The cost for preventing nesting shall be included in the cost of Debris Containment B-40-899.

All construction activities should occur in an environmentally sound manner. This includes the proper disposal of all demolition material that cannot be recycled.

4. Traffic.

Lisbon Avenue over the Canadian Pacific Railway will be closed to through traffic during construction operations under this contract. Provide access to properties adjacent to the bridge and approaches, unless noted in the traffic control plan, except for minimum time necessary to undertake construction activities in the immediate vicinity of the property.

Maintain pedestrian access at all times to the entrances to the properties as shown on the plans and directed by the engineer.

All posting of parking restrictions required to facilitate construction operations will be provided by the City of Milwaukee, Infrastructure Services Division, or as directed by the engineer. Contact James Brown at (414) 286-3276, at least three working days prior to the start of construction operations.

Each barricade, sign, or other traffic control device shall bear the name and telephone number for 24-hour emergency service, printed in letters at least 3/4-inch in height.

Provide continuous 24-hours-a-day availability of equipment and forces to expeditiously restore barricades, lights, signs or other traffic control devices that are damaged or disturbed, and in no case shall the elapsed time between the notification of damage (disturbed) and restoration of traffic control devices exceed two hours. The cost to maintain and restore the above items shall be considered incidental to the item of Traffic Control and no additional payment will be made therefore.

5. Work Restrictions.

Comply with all local ordinances that apply to local street work operations, including those pertaining to working during Night Time hours. Furnish any ordinance variance issued by the municipality or required permits to the engineer, in writing, 3 days prior to performing such work. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the Engineer.

Maintain or provide where necessary pedestrian access to adjacent properties, businesses, recreation areas, and bus stops as directed by the engineer.

Provide adequate temporary sidewalk and bridging between the curb and right-of-way line over freshly paved concrete or other obstructions in the sidewalk area at entrances to buildings, as directed by the engineer.

Do not remove any existing trees, street light poles, hydrants and other utility poles without the written approval of the engineer. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees, hydrants, poles, and the construction equipment.

Construct driveway approaches as shown on the plans. Do not close or remove any approaches without sufficient notice given to the occupants of the premises to remove their vehicles prior to driveway removal or closing of the driveway approach access.

If the contractor can make other access arrangement, agreed to in writing and signed by the contractor and the property owner serviced by the driveway, other sequencing will be allowed when approved by the engineer.

6. Work Done by Others.

All electrical work for wiring and installing the fixtures on the lighting supports will be done by City of Milwaukee crews. The contractor is responsible for supplying and installing all conduit and junction boxes as detailed in other special provisions.

All utility work for wiring and installing AT&T facilities will be done by a contractor for AT&T under a separate contract. The contractor is responsible for coordinating with AT&T in a timely manner as described in the utilities special provision to keep the project on schedule.

7. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.

8. Railroad Insurance and Coordination.

A Description

Comply with standard spec 107.17 for all work affecting Canadian Pacific (SOO Line) property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Canadian Pacific (SOO Line).

Notify evidence of the required coverage, and duration to Daniel Sabatka at (630)860-4430; 11306 Franklin Avenue, Franklin Park, IL 60131. Include the following information on the insurance document:

Job Number BR100120107

Route Name West Lisbon Avenue, Milwaukee

Crossing ID Existing P-40-884; Proposed B-40-899

Railroad Subdivision North Milwaukee Line

Railroad Milepost 89.82

A.2 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions and will be accomplished without cost to the contractor. None.

A.3 Names and addresses of Railroad Representatives for Consultation and Coordination

For ALL OTHER Counties:

Contact Edward Oom, Manager Public Works, 11306 Franklin Avenue, Franklin Park, IL 60131; TELEPHONE (630) 701-5882; email Edward.Oom@cpr.ca for consultation on railroad requirements during construction.

* Contact CP(SOO) – Otis Goodman – Supervisor Public Works, 11306 Franklin Avenue, Franklin Park, IL 60131; telephone (630) 860-4477; email goo0064@cpr.ca prior to letting for flagman work hour availability.

for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

A.4 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 several weeks prior to the time needed. Approval is subject to the discretion of the railroad. The City has made no arrangements for a temporary grade crossing.

A.5 Train Operation

Approximately 0 passenger trains and 2 through freight trains operate daily through the construction site. Through freight trains operate at up to 10 mph. There are switching movements one mile North and one mile South of the Lisbon Avenue crossing.

A.6 Temporary Clearances During Construction

Replace subparagraphs (3) 4.1 and (3) 4.2 of standard spec 107.17.1 with the following:

Provide 8 feet 6 inches (2.6 m) plus 1.5 inches (38 mm) per degree of track curvature, measured horizontally from the track center line.

Provide 20 feet 0 inches (6.1 m) plus compensation for super-elevated track, measured vertically above the top of the highest rails.

Any debris containment and impacts to the temporary vertical clearance shall be reviewed and approved by the Railroad prior to obstruction.

B Railroad Flagging

Arrange with the railroad for the flagging of trains and safety of railroad operations when working between the clearance fences specified. The following conditions may also warrant flagging:

1. Cranes swinging or handling materials or equipment between clearance fences.
2. Construction operations that are in proximity of power lines or railroad signal and communication lines, underground cables, fuel oil facilities or pipe lines and which might result in fire or damage to such facilities, danger to railroad operations or danger to the public in the transaction of business on railroad premises.
3. Excavation, tunneling, blasting, pile driving, placing, or removing cofferdams or sheeting, or similar activities might cause the railroad's tracks or buildings to be undermined, heaved out of normal level, shifted out of alignment, or otherwise impaired.
4. Bridge painting activities including rigging of falsework, scaffolding or similar activities between clearance fences.
5. Deck removal activities within 25 feet of the centerline of any track.
6. Pouring of bridge decks in spans over an operated track.
7. At any other time in railroad representative's judgment, the contractor's work or operations constitute an intrusion into the track zone and create an extraordinary hazard to railroad traffic, and at any other time when flagging protection is necessary for safety to comply with the operating rules of the railroad.

Projects with concurrent activity may require more than one flagger.

Projects with heavy contractor activity between clearance fences or unusual or heavy impact on railroad facilities will normally require a full-time flagger.

The City and railroad will monitor operations for compliance with the above flagging requirements. Violations may result in removal from railroad property until arrangements to adhere to the flagging requirements are satisfied. If the railroad imposes additional flagging requirements beyond the above flagging requirements due to the previous violations, the contractor shall bear all costs of the additional flagging requirements.

C Flagging by Railroad– Railroad Does Not Pay Flagging Costs

C.1 General

Replace paragraph (3) of standard spec 107.17.1 with the following:

Comply with the railroad's rules and regulations regarding operations on railroad right-of-way. If the railroad's chief engineering officer requires, arrange with the railroad to obtain the services of qualified railroad employees to protect railroad traffic through the work area. Bear the cost of these services and make payment directly to the railroad. Notify the appropriate railroad representative as listed in section A.3 above, in writing, at least 30 business days before starting work near a track. Provide the specific time planned to start the operations.

C.2 Rates – Canadian Pacific (Soo Line)

The following rates, reimbursement provisions, and excluded conditions will be used to determine the contractor's cost of flagging:

\$750 daily rate for an eight-hour day (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

\$1,100 daily rate for an eight-hour day on Saturdays, Sundays or holidays (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

\$135 per hour overtime rate for all time worked before or after the regular assigned eight hours on any day, or for a minimum three hour call on Saturdays, Sundays, or Holidays.

If a flagger must be relieved due to hours of service requirements, arrangements will be made for a relief flagger.

The flagger is required to set flags each day in advance of the contractor commencing work that will require flagging. The flagger must also remove the flags each day after the completion of work that required flagging. Any time worked before or after the minimum eight-hour flagging day to set or remove flags will be billed at the overtime rate. The contractor is responsible for knowing the requirements of the railroad for arranging and terminating flagging services and for the associated costs of those services.

C.3 Reimbursement Provisions

The actual cost for flagging will be billed by the railroad. After the completion of the work requiring flagging protection as provided in section B above, the City will reimburse 100% of the cost of such services up to the rates provided above based on paid railroad invoices, except for the excluded conditions enumerated below. In the event actual flagging rates exceed the rates stated above, the City will reimburse 100% of the portion of the rate that is greater than the rates stated above.

C.4 Excluded Conditions

The City will not reimburse any of the cost for additional flagging attributable to the following:

1. Additional flagging requirements imposed by the railroad beyond the flagging requirements provided in subsection B above due to violations by the contractor.
2. Temporary construction crossings arranged for by the contractor.

The contractor shall bear all costs of the additional flagging requirements for the excluded conditions.

C.5 Payment for Flagging

Railroads may issue progressive bills. Notify the railroad when the work is completed and request a final bill from the railroad. The railroad will issue a final bill. Promptly pay railroad-flagging bills, less any charges that may be in dispute. The City will pay for flagging reimbursement. The City will withhold flagging reimbursement until any disputed charges are resolved and the final bill is paid. No reimbursement for flagging will be made by the City if a violation of subsection B is documented.

D Rail Security Awareness and Contractor Orientation

Prior to entry on railroad right-of-way, the contractor shall arrange for on-line security awareness and contractor orientation training and testing, and be registered through “e-RAILSAFE” for all contractor and subcontractor employees working on railroad right-of-way. See e-railsafe.com “Information”. The security awareness and contractor orientation training is shown under the railroad’s name. The City has secured right of entry to railroad property; neither the contractor nor subcontractors or their employees will be required to sign a right-of-entry form. The security awareness and contractor orientation certification is valid for 2 year(s) and must be renewed for projects that will carry over beyond the 2 year period. Contractor and subcontractor employees shall wear the identification badge issued by e-RAILSAFE when on railroad right-of-way. Costs associated with training and registration are incidental to other items in the contract.

9. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

Coordinate construction activities with a call to Digger’s Hotline or a direct call to the utilities that have facilities in the area as required by statutes. Use caution to ensure the

integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Note: Bidders are advised to contact each utility company listed in the plans prior to preparing their bid to obtain current information on the status of each utility company's work required in association with the project. Existing trees, street light poles, hydrants and utility poles are to remain in place during construction. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees, hydrants, poles, other utilities and any other physical structures and the paving equipment. All bidders shall be capable of providing zero clearance behind the curb to accommodate existing obstructions at no additional cost to the project. During paving operations keep all manholes accessible to utility companies for emergencies.

A City of Milwaukee

A.1 Water (WAT)

There is an existing 16" water main located inside of a concrete tunnel (7'-9"(H) x 7'-0"(W) outside dimensions) under the bridge. This utility will remain in place and in service during construction. Contractor shall take care to expose the top of the concrete tunnel prior to pile driving operations, which will be included in the bid item 'Excavation for Structures Bridges (B-40-899)'. One foot (1'-0") clearance from the outside edge of the concrete tunnel must be maintained during pile placement and driving operations. The proposed construction activities shall not affect the integrity of the existing water main or tunnel. If damaged, the contractor will be responsible for all costs incurred to restore the water main to its original condition. Adjustment of the water boxes and manholes located at the East and West sides of the bridge is to be performed by the contractor and will be paid for under bid items Adjusting Water Boxes SPV.0060.01 and Adjusting Manhole Frames & Lids SPV.0060.02.

A.2 Combined Sewer (CMB)

The City of Milwaukee has an existing 36" combined sewer located under the bridge, which will remain in place. The sewer will be re-lined prior to construction under a separate contract. Two and one half feet (2'-6") clearance from the outside edge of the sewer must be maintained during pile placement and driving operations. Preboring of the piles shall be performed to protect the utility, and will be paid for under that bid item.

A.3 Underground Conduit and Communications (CUC)

The City of Milwaukee has an existing 2.5"x10" terra cotta conduit cast into the underside of the South sidewalk of W. Lisbon Avenue. The utility will be relocated by City forces prior to construction. The contractor shall remove and dispose of the conduits, which shall be included under the bid item 'Removing Old Structure'. Four (4) four-inch (4") PVC conduits will be provided by the contractor and cast into the new structure B-40-899, and continue one foot (1'-0") beyond the reinforced concrete anchor slabs as shown on the plans. Concrete encased conduit shall be provided and installed by the contractor in accordance with these specifications in the approach roadway and as shown on the plans. These conduits are to have a 3/8" nylon pull rope installed between manholes.

Contact Mr. David Henke at (414)286-3248 two weeks prior to the start of construction for coordination. If Mr. Henke is not available, please contact the dispatch office at (414)286-5944 or (414)286-3686.

A.4 Forestry

There is one 1"-5" diameter tree located inside the project limits that shall remain. The root system on the walk side of the tree shall be cut not deeper than 9" below the finished grade of the new walks, and not more than 5" from the edge of the new walk. Roots in the walk area shall be removed only by the use of hand implements and to a depth not more than 9" below finished grade of the new walk. The root system on the curb side shall not be cut more than 2" behind the back edge of the new curb, and not more than 18" in depth when constructing new curb and gutter. Exposed tree roots shall be covered with mulch and watered from a period immediately following curb and gutter removal, until the area is backfilled.

All cutting for the removal of sod and soil in order to establish a finished grade within 4 feet of existing trees must be done manually if necessary. No construction equipment, cars, trucks, materials shall be parked or stored on any median or tree border on this project of adjacent roadways. Root foundations must remain adequate to withstand heavy windstorms. Root systems of street trees shall not be cut for the installation of any type of cable by the contractor or City department. Contact the Forestry Division at 708-2428 for directional boring specifications. Caution should be used during the construction process to avoid damage to the roots, trunks, and branches of all street trees. Damage caused to any street tree or irrigation system will be repaired by the Forestry Division and the costs of repair, rejuvenation, and/or value lost will be billed to the contractor or credited against the contract at the option of the City.

At locations where the contractor has not complied with the Forestry Special Requirements stated in the special provisions above, and the maximum clearance was exceeded or a thin form was not used, a minimum credit to the City of \$50.00 per location will be taken. The credit will increase in proportion to the excess distance beyond clearance allowed. The credit will be \$50.00 for each two inch increment or part thereof in excess of the initial clearance allowed. Any damage to the tree's structure totaling fifteen percent of the trees value will be billed on a prorated basis. If, in the opinion of the Forestry Division, the tree has been damaged to the point that it warrants removal, the credit that will be taken will be equal to \$100.00 per inch diameter of the tree. A field measurement will be taken to determine the tree size.

A.5 Street Lighting (TE&ES)

There are two (2) two and one half-inch (2.5") street lighting conduits cast into the bridge under the North and South sidewalks, one at each sidewalk. Before construction starts on the structure, but only after Lisbon Avenue is closed to traffic, Street Lighting forces will pull the lighting units at the corners of the bridge, and disconnect and abandon the cables running through it. Removal and disposal of the existing conduits will be part of the bid item 'Removing Old Structure'.

Contact City of Milwaukee Street Lighting Field Operations one week before any construction work starts. Contacts: Mr. Dennis Miller at 414-708-4251 or Mr. George Berdine at 414-708-4245.

The contractor is responsible for supplying and installing conduit and junction boxes as detailed in the plans. The contractor shall contact the City Street Lighting Field Operations as noted above after the new conduit is installed but before concrete is poured for inspection of the installation. There must be an expansion couple installed where ever the conduit(s) exits the structure. All conduits in the deck are to be 2 ½-Inch, schedule 40 PVC. See Conduit Rigid Nonmetallic Schedule 40, 2 ½-Inch for further details. Each conduit is to be extended three (3) feet beyond the anchor slab. The end of the pipe is to be identified on the curb with an arrow embossed into the top of the curb. These conduits are to have a 3/8-inch nylon pull rope installed and they are also to be capped with a temporary cap.

City forces will install the permanent lighting units on the bridge in coordination with and following construction.

The contractor is to keep City Field Operations informed of the progress of the bridge construction. Contact Mr. Dennis Miller at 414-708-4251 or Mr. George Berdine at 414-708-4245 or Dispatcher at (414) 286-5944.

If the contractor requests the relocation of any street lighting facilities, permanent or temporary, for his convenience, he will be responsible for all costs incurred by the street lighting personnel fulfilling his request.

Report any accidental damages to street lighting facilities, as soon as possible to Street Lighting Field Operations (414) 286-3481. The contractor will be held liable for those costs.

B We Energies – Electric (E)

There are four (4) three and one half-inch (3.5”) abandoned electrical conduits cast into the bridge under the South sidewalk. The contractor shall remove and dispose of the conduits, which shall be included under the bid item ‘Removing Old Structure’.

C We Energies – Gas (G)

There are two (2) six-inch (6”) abandoned gas pipes cast into the bridge under the North and South sidewalks, one at each sidewalk. These pipes have asbestos insulation, which will be removed by We Energies during removal of the existing bridge. Contractor shall call Paul Osmanski at (414) 315-1728 four weeks prior to bridge removal for coordination with We Energies asbestos remediation contractor.

D AT&T (T)

AT&T has nine (9) existing clay tile conduits cast into the bridge deck under the north sidewalk. The existing cables in the conduits will be relocated by AT&T to temporary overhead lines north of the bridge prior to the start of construction. The contractor shall

follow all OSHA guidelines for crane operations near the overhead lines. All costs associated with the removal and disposal of the existing AT&T conduits will be paid for under the bid item 'Removing Old Structure'. Prior to pouring the bridge deck, AT&T shall supply and install four (4) five-inch (5") conduits in the location shown on the plans (on sheet 3). The contractor shall call Mr. Dean Herro of AT&T at (414)-678-2644 ten (10) working days prior to the start of the deck pour to coordinate the installation of the conduits.

10. Coordination with Businesses.

The contractor shall arrange and conduct a meeting between the contractor, the City, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Contact Cecelia Gilbert, City of Milwaukee's Support for Business Liaison at (414)286-3318 to coordinate the meeting and contact with local businesses. Hold the first meeting prior to the start of work under this contract and additional meetings held thereafter when there is an impact to an adjacent property owner or a change in traffic pattern.

11. Clearing and Grubbing.

Perform this work in accordance to the requirements of standard spec 201, except as hereinafter modified.

Modify standard spec 201.4.3 to read that the City will measure Clearing and Grubbing by the square yard acceptably completed within the designated limits. The horizontal area calculated will be based on the limitations as shown on the plans and follow the guidelines outlined in standard spec 201.3. The City will measure outside the right-of-way limits, inside the acquired easements. The City will include areas containing brush, shrubs, and vegetation.

12. Field Facilities.

Replace standard spec 642.2.2.1 (1) with the following:

Provide the field office with up to three communication services, designated as follows: 1-voice, 1-fax, and 1-high speed Internet connection for computer(s) at setting no less than 384 K and up to 1 MB. The high speed Internet connection must utilize either DHCP or PPPoE as the connection method and may be combined with the fax service.

Provide two programmable touch-tone telephones of which one will be a cordless type operating at no less than 2.4 GHz and one will have an answering machine unless voice mail service is available. The telephones and the communication services are for the sole purpose of the City staff.

13. Removing Concrete Sidewalk.

The removal of concrete driveways is included in and measured and paid for under the item Removing Concrete Sidewalk.

14. Debris Containment B-40-899, Item 203.0225.S.

A Description

This special provision describes providing a containment system to prevent debris from structure removal, reconstruction, or other construction operations from falling onto facilities located under the structure. Using this containment system does not relieve the contractor of requirements under standard spec 107.17 and standard spec 107.19 or requirements under a US Army Corps of Engineers Section 404 Permit.

B (Vacant)

C Construction

Prior to starting work, submit a debris containment plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work over Canadian Pacific (Soo Line) Railway until the engineer approves the debris containment plan.

Maintain adequate protection throughout construction for people and property within the potential fall zone. Ensure that a containment system capable of protecting underlying facilities from falling construction debris is in place before beginning deck, parapet, or pier removal, or other operations that may generate debris.

At least 15 working days before conducting potential debris generating operations, contact the following owners or lessees:

1. Edward Oom; Manager Public Works; Canadian Pacific; 11306 Franklin Avenue, Franklin Park, IL 60131; (630)860-4975

D Measurement

The City will measure Debris Containment B-40-899 as a single lump sum unit of work for each structure acceptably completed.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
203.0225.S	Debris Containment B-40-899	LS

Payment is full compensation for furnishing, installing, maintaining, and removing a debris containment system.

15. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item 205.0501.S.01, 205.0501.S.02, 205.0501.S.03, 205.0501.S.04, 205.0501.S.05.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a DNR approved bioremediation facility. The closest DNR approved bioremediation facilities are:

-Waste Management: Orchard Ridge RDF, W124 N9355 Boundary Rd, Menomonee Falls, WI

-Advanced Waste: WMWI – Metro Recycling and Disposal, 10712 S. 124th Street, Franklin, WI

Perform this work in accordance to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Location(s)

The City completed testing for soil and groundwater contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present. All excavated material from both east and west abutment footings, from all four MSE retaining wall leveling pads, and from removal limits of the existing piers/abutments is assumed to be contaminated.

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer.

For further information regarding previous investigation and remediation activities at these sites contact:

Name: Alak Roy
Address: City of Milwaukee; 841 N. Broadway, Milwaukee, WI 53202
Phone: (414) 286-0451
Fax: (414) 286-0475
e-mail: alak.roy@milwaukee.gov

A.3 Coordination

The contractor will be responsible for documenting the activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and obtaining the necessary approvals for disposal of contaminated soil from the bioremediation facility.

The contractor shall identify the DNR approved bioremediation facility that will be used for disposal of contaminated soils, and provide this information prior to commencement of

excavation activities. The contractor will be responsible for obtaining the necessary approvals for disposal of contaminated soils from the bioremediation facility.

A.4 Health and Safety Requirements

Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, fuel oil, or other petroleum related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction

Supplement standard spec 205.3 with the following:

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated.

Directly load and haul soils for offsite bioremediation to the DNR approved bioremediation facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site bioremediation so as not to contain free liquids.

D Measurement

The City will measure Excavation, Hauling, and Disposal of Petroleum Contaminated Soil in tons of contaminated soil accepted by the bioremediation facility as documented by weight tickets generated by the bioremediation facility.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S.01	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton
205.0501.S.02	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton

205.0501.S.03	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton
205.0501.S.04	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton
205.0501.S.05	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton

Payment is full compensation for excavating, loading, hauling, and treatment via bioremediation of contaminated soil; obtaining solid waste collection and transportation service operating licenses; and dewatering of soils prior to transport, if necessary; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work. No additional payment will be made for tipping fees associated with disposal of contaminated soil.

16. Temporary Shoring, Item 206.6000.S.

A Description

This special provision describes designing and providing temporary shoring at locations the plans show. Contractor shall design shoring following Union Pacific Railroad's "Guidelines for Temporary Shoring" published October 25, 2004 for removal of the existing east pier of P-40-884 to two and one half-feet (2'-6") below existing grade for Cooper E-80 loading.

B Materials

B.1 Shoring Design

Provide a shoring design for each location where the plan requires temporary shoring. Have a professional engineer, registered in the State of Wisconsin and knowledgeable of the specific site conditions and requirements verify the adequacy of the design. Submit one copy of each shoring design, signed and sealed by the same professional engineer verifying the design, to the engineer and the railroad for review, approval and for incorporation into the permanent project record.

C Construction

Provide temporary shoring at each required location conforming to the design developed for that location.

Remove the shoring when it is no longer needed unless the engineer allows it to remain in place. Backfill the space that is excavated but not occupied by the new permanent construction conforming to standard spec 206.3.13.

D Measurement

The City will measure Temporary Shoring by the square foot acceptably completed at locations the plans show, measured as the area of exposed face in the plane of the shoring from the ground line in front of the shoring to a maximum of one foot above the retained grade. Shoring used for staged construction in multiple configurations without removal and reinstallation will be measured once based on the configuration with the largest area of exposed face.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item.

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S	Temporary Shoring	SF

Payment is full compensation for designing and providing shoring; for providing a signed, sealed, and approved copy of the design; and for backfilling and removing the shoring.

The City will not pay for temporary shoring, installed for contractor convenience that is not required in the plans.

17. Backfilling and Sloping.

Amend standard spec 209 to include the following:

Backfill material must meet the requirements where sodding, seeding, or topsoil is to be performed. Furnish material in the top 6-inch layer that ranges from a sandy loam to a clay soil and passes a 2-inch sieve with a minimum of 95 percent passing a 3/8-inch sieve. Thoroughly compact topsoil material placed in areas to be sodded or seeded including the area behind new concrete curb and gutter. Flood or compact with jumbling juck or vibrating plate devices in that area to prevent settlement. Compact the filled area under the abutments and alongside the retaining walls to at least 95 percent compaction.

Re-topsoil graded area as designated by the engineer, immediately after grading is completed within those areas. Sod all topsoil areas within 5 working days after placement of topsoil.

18. Concrete Pavement, 9-inch.

Construct 9-inch, Non-Reinforced, Doweled Concrete Pavement in accordance to the requirements in standard spec 415 except as hereinafter modified.

All doweled transverse joints on this project shall be laid out by the contractor and approved by the engineer. The joint spacing shall not exceed 15-feet as shown in the standard detail drawing and shall be placed at the end-of-radii, center line and flange line extended, all zero-face driveway openings for depressed driveways and when feasible at all manholes, catch basins on inlets, and water valve boxes. The cost of all jointing shall be included in the unit bid price for concrete pavement.

19. Protection of Concrete.

Supplement subsection 415.3.16 of the standard specifications as follows:

Provide a minimum of one concrete finisher to remain on the project site after final finishing of all concrete surfaces until such time as the concrete has hardened sufficiently

to resist surface scarring caused by footprints, handprints, or any other type of imprint, malicious or otherwise. Finisher must actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above.

Include the cost for providing the finisher(s) the necessary equipment, and materials in the contract unit price for each concrete item.

Place the concrete on a moist foundation, deposit to the required depth, and consolidate and spade sufficiently to bring the mortar to the surface, after which strike it off and float with a wooden float. Before the mortar is set, steel trowel, and brush the surface.

20. Concrete Identification Stamping.

Stamp ends of all monolithic Portland cement concrete surfaces with a stamp bearing the contractor's name and year of construction. All letters shall be 2-inches in height.

Include the cost of this work in the contract unit price for other Portland cement concrete items; no additional payment will be made.

21. Concrete Masonry Aggregates.

Modify standard spec 501 as follows:

A Size Requirements

Supplement standard spec 501.2.5.4.4(4) with the following:

Course aggregate for Concrete Grade A must consist entirely of size No. 1 when used in curb, curb and gutter, driveways, sidewalks, or steps.

22. Concrete Staining B-40-899, R-40-606, R-40-607, R-40-608, R-40-609, Item 517.1010.S.01, 517.1010.S.02, 517.1010.S.03, 517.1010.S.04, 517.1010.S.05.

A Description

Furnish and apply a two coat concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products
	Thorseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied in accordance to manufacturer's recommendations:

Acrylic Bonding Admixture: TK-225 by TK Products
Achro 60 by Thoro Products
Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

Tri-Sheen Concrete Surfacers, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure & Seal EPX by Chem Masters
H + C Shield Plus by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials in accordance to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain in accordance to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45° F or higher, or as given by the manufacturer.

Finish Color: The color will be selected by the City of Milwaukee from drawdowns submitted by the contractor and test areas. Submit 3 drawdowns of the following colors to the City for review:

Federal Standard 23522 beige, flat finish
Federal Standard 20460 grey-beige, flat finish
Federal Standard 26405 grey, flat finish

The City of Milwaukee will either approve of one of the above three colors, or request for three drawdowns of an additional color. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the City approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces in accordance to the plan.

D Measurement

The City will measure Concrete Staining (Structure) in area by the square foot of surface, acceptably prepared and stained.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining B-40-899	SF
517.1010.S.02	Concrete Staining R-40-606	SF
517.1010.S.03	Concrete Staining R-40-607	SF
517.1010.S.04	Concrete Staining R-40-608	SF
517.1010.S.05	Concrete Staining R-40-609	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.

23. Concrete Staining Multi-Color B-40-899, R-40-606, R-40-607, R-40-608, R-40-609, Item 517.1015.S.01, 517.1015.S.02, 517.1015.S.03, 517.1015.S.04, 517.1015.S.05.

A Description

Furnish and apply a multi-color concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement: Tri-Mix by TK Products
 Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied in accordance to manufacturer's recommendations:

Acrylic Bonding Admixture: TK-225 by TK Products
 Achro 60 by Thoro Products
 Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure & Seal EPX by Chem Masters
H + C Shield Plus by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials in accordance to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain in accordance to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45° F or higher, or as given by the manufacturer.

Finish Color: Stain the joints between brick produced by the form liner to create the appearance of grouted joints in the same color as that selected for 'Concrete Stain 517.1010.S'.

Colors will be selected by the City from the drawdowns submitted by the contractor and test areas. All formliner shall receive a solid base coat of the selected color from 'Concrete Stain 517.1010.S' before receiving the multi-color finish coat. Three accent colors shall be applied as follows:

Federal Standard 12160, red, flat finish - 70% accent color

Federal Standard 10091, dark red, flat finish – 15% accent color

Federal Standard 10219, light brown, flat finish – 15% accent color, 15%, 15%

Contractor shall submit 3 drawdowns of each color.

The City of Milwaukee will either approve of the colors, or request for three drawdowns of an additional color. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

The color of the staining shall produce a multi-color effect that consists of replicating brick coloration.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain

manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Submit color samples to the City prior to staining the sample panels. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between stones produced by the form liner. Do not apply stain to the structure until the City approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces in accordance to the plan.

D Measurement

The City will measure Concrete Staining Multi-Color (Structure) in area by the square foot of surface, acceptably prepared and stained.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.01	Concrete Staining Multi-Color B-40-899	SF
517.1015.S.02	Concrete Staining Multi-Color R-40-606	SF
517.1015.S.03	Concrete Staining Multi-Color R-40-607	SF
517.1015.S.04	Concrete Staining Multi-Color R-40-608	SF
517.1015.S.05	Concrete Staining Multi-Color R-40-609	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.

24. Architectural Surface Treatment B-40-899, R-40-606, R-40-607, R-40-608, R-40-609, Item 517.1050.S.01, 517.1050.S.02, 517.1050.S.03, 517.1050.S.04, 517.1050.S.05.

A Description

Construct a concrete masonry architectural surface treatment on the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

Use form liners that attach easily to the forming system, and do not compress more than 1/4-inch when poured at a rate of 10 vertical feet/hour.

Use a release agent that is compatible with the form liner and coloring materials.

Wall ties shall have set "break-backs" at a minimum of 3/4-inches from the finished concrete surface.

C Construction

C.1 Equipment

Equipment and tools necessary for performing all parts of the work shall be satisfactory as to design, capacity, and mechanical condition for the purposes intended. Repair, improve, replace, or supplement all equipment that is not maintained in full working order, or which is proven inadequate to obtain the results prescribed.

C.2 Form Liner Preparation

Clean the form liner prior to each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than ¼-inch from each other, attach liner securely to forms in accordance to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.4 Surface Finishing

Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

D Measurement

The City will measure Architectural Surface Treatment (Structure) in area by the square foot of architectural surface acceptably completed.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.01	Architectural Surface Treatment B-40-899	SF
517.1050.S.02	Architectural Surface Treatment R-40-606	SF
517.1050.S.03	Architectural Surface Treatment R-40-607	SF
517.1050.S.04	Architectural Surface Treatment R-40-608	SF
517.1050.S.05	Architectural Surface Treatment R-40-609	SF

Payment is full compensation for producing the proposed architectural surface treatment including: preparing the foundation; finishing and protecting the surface treatment; and for properly disposing of surplus material.

25. Wall Concrete Panel Mechanically Stabilized Earth LRFD, Item 532.0500.S.01, 532.0500.S.02, 532.0500.S.03, 532.0500.S.04

A Description

This special provision describes furnishing materials and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on

the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years and designed by the wall manufacturer per LRFD standards.

B Materials

B.1 Proprietary Mechanically Stabilized Earth Concrete Panel Wall Systems

The City specifies approved concrete panel mechanically stabilized earth wall products on the Wisconsin Department of Transportation's (WISDOT) approved product list.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the City Engineer or his representative. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of production. The WISDOT maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system requiring pre-approval must have been pre-approved and added to that list prior to the bid opening date.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of chapter 14 of the WISDOT's Bridge Manual.

B.2 Design Requirements

It is the responsibility of the contractor to supply a LRFD design and supporting documentation as required by this special provision for review by the City to show the proposed wall design is in compliance with the design specifications. Four copies of the following shall be submitted to the engineer for review and acceptance no later than 60 days from the date of notification to proceed with the project.

The design/shop plans shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

This work shall consist of furnishing the LRFD design, construction plans, construction specifications, shop drawings, materials, and the construction of a mechanically stabilized earth retaining wall as shown on the plans, as hereinafter provided and in accordance to the applicable portions of the LRFD AASHTO Standard Specification for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the City.

Design and construct the walls in accordance to the lines, grades and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels.

The design of the mechanically stabilized earth retaining walls shall consider the internal stability of the wall mass, including reinforcement pullout resistance. The design shall be in compliance with the current LRFD AASHTO standard specifications for Mechanically Stabilized Earth Walls, except that the maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees. The walls shall be designed for the heights shown on the plans, and shall include the effects of highway surcharge loading. The surface area of a single panel cannot exceed 60 square feet. The maximum height of a panel shall be 5 feet. The design of the steel reinforcement within the panels shall be based on one-way bending action. The soil reinforcement at the top of the wall shall be designed for an additional horizontal traffic load as given in AASHTO if a traffic rail or parapet is detailed. If the wall is installed in front of a bridge abutment, it shall also be designed to resist the applied abutment/bridge lateral forces. The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 the wall height or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement shall extend a minimum of 3 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. Connect 100% of the soil reinforcement to the wall. Metal ground reinforcement shall be prefabricated into single or multiple elements before galvanizing. Ground reinforcement shall be fabricated to avoid piling, drainage structures or other obstacles in the fill without field modifications. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited.

Use full wall height slip joints at points of differential settlement when detailed on the plan. Design the wall panels and joints between panels to accommodate a differential settlement of 1 foot over a 100-foot length. Use a wall leveling pad that consists of poured concrete masonry, Grade A conforming to standard spec 501 as modified in standard spec 716. Provide QMP for class II concrete as specified in standard spec 716. The minimum cross section of the leveling pad shall be 6-inches deep by 2-feet wide. The minimum embedment to the top of the leveling pad shall be 2 feet or as given in the plan or as given in Section 5.8.1 of AASHTO, whichever is greater. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Step the leveling pad to follow the general slope of the ground line. The leveling pad's steps shall keep the bottom of the wall within one half the panel height of the minimum embedment i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed but will not be measured for payment.

B.3 Wall System Components

B.3.1 General

The walls shall have modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. All steel portions of the wall system exposed to earth shall be either galvanized or epoxy coated. All ground reinforcement steel required for the reinforced volume shall be connected to the face panels and shall develop a factor of safety for the design force of 1.5 based on the failure load or based on the load at 0.5 inch deformation, whichever is less. The minimum strength of the precast concrete face panels shall be 4000 psi. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover the panel joints. The geotextile shall meet the physical requirements as stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be 180 lb or above in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. A geosynthetic waterproof membrane is not required to cover the reinforced mass.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material conforming to the following gradation requirements.

Sieve Size	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	-0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90.

In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	4.5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.

Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

Prior to placement of the backfill, obtain and furnish to the engineer current certified report of test results that the backfill material complies with the requirements of this specification. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

C Construction

C.1 Excavation and Backfill

Excavation will encompass the preparation of the foundation for the leveling pad and the reinforcing strips in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Site preparation work for MSE wall construction should start with excavating and removing the deleterious fill material from the wall area to the design subgrade elevation. The exposed subgrade soils should be compacted with a sheepsfoot roller immediately prior to wall construction and be inspected by the City Geotechnical Engineer to identify the presence of unsuitable soils, if any. Unsuitable soils should be removed and replaced with adequately compacted engineered fill.

Compact all backfill behind the wall as specified in standard spec 207.3.6 in 8-inch lifts. For walls with a maximum height greater than 6 feet, compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Perform compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2-foot layer per 200 feet of wall, or major portion thereof. A minimum of one test for every 2-foot layer is required. Test sites shall be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The cost of compaction testing shall be considered incidental to the cost of the wall.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

C.2 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. Vertical tolerances and horizontal alignment tolerances shall not exceed $\frac{3}{4}$ -inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be $\frac{3}{4}$ -inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed $\frac{1}{2}$ -inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Failure to meet this tolerance may cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. Provide a $\frac{3}{4}$ -inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins.

C.3 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completing the excavation of the entire reinforced zone, the City's Soils Engineer shall inspect the site and determine if the foundation is adequate for the intended loads. Allow the Soils Engineer two working days to perform the inspection.

D Measurement

The City will measure Wall Concrete Panel Mechanically Stabilized Earth LRFD in area by the square foot of face on a vertical plane between the top of the leveling pad and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless ordered by the engineer, wall area constructed above or below these limits will not be measured for payment.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
532.0500.S.01	Wall Concrete Panel Mechanically Stabilized Earth LRFD	SF
532.0500.S.02	Wall Concrete Panel Mechanically Stabilized Earth LRFD	SF
532.0500.S.03	Wall Concrete Panel Mechanically Stabilized Earth LRFD	SF
532.0500.S.04	Wall Concrete Panel Mechanically Stabilized Earth LRFD	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system; providing backfill, backfilling and compacting; and performing compaction testing. Parapets, railings, abutment bodies and other items above the wall cap

or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

26. Construction Staking

Supplement standard spec 650 with the following:

- Stake each plan grade so that the form-setters and inspectors can check the grade and alignment.
- Item 650.6500 includes staking for the adjustment of TE&ES, CUC, and Water manhole covers.

27. Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch, Item 652.0230 and Conduit Rigid Nonmetallic Schedule 40 4-Inch, Item 652.0240

Perform this work in accordance to section 652 of the standard specifications except as otherwise provided in the plans or hereinafter provided.

Furnish and install a total of two 2 1/2-inch diameter PVC conduits and four 4-inch diameter PVC conduits. One 2 1/2-inch conduit will be installed in the north sidewalk and one 2 1/2-inch conduit in the south sidewalk. The four 4-inch conduit package will be located inside the bridge deck near the south right-of-way line. Install the conduits as shown in the plans, in accordance to the pertinent requirements of standard spec 652, and as hereinafter provided. Installation will require integration with existing field conditions. Appropriate adjustment on conduit locations may be made if the field conditions are such that the pipes cannot be installed at the specified locations. Any relocation of greater than 5 feet must be approved by the engineer.

Furnish schedule 40 polyvinyl chloride (PVC) conduits. The City will accept the conduit on the basis of the manufacturer's Certificate of Compliance and field inspection by the engineer upon delivery to the project.

PVC conduit and all fittings shall conform to the requirements of the standard specifications for Smooth-Wall Poly Vinyl Chloride (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

Direct all material questions regarding the city conduits to Mr. Eng-Kie Lee, (414) 286-2174.

1. Placing of duct: Inspect all ducts before placing to see that the bores are clean and free from mud, sand, and detritus. Only use ducts with a smooth bore, free from burrs, and rough projections. Smooth off burrs or other rough areas found in the duct that is likely to damage cable. Smooth them off by rasping or scraping.

2. Install a standard expansion coupling on all ducts at all bridge expansion locations as indicated on the plans.
3. Place end caps on all ducts terminating outside of the abutments and tape caps in place.
4. A 3/8-inch nylon pull rope is to be installed in each pipe.
5. All conduits are to be extended beyond the bridge structure by three feet. If the conduit terminated under a sidewalk area there is to be an indication stamped into the curb at the end of the pipe. There is to be a box out of a 3-feet by 5-feet centered over the pipe ending, with the long dimension running parallel with the curb.

Inspection: Contact George Berdine, (414) 708-4245 cell / (414) 286-5943 office, Thomas Hughes (414) 708-3175 cell / (414) 286-3457 office, or Dennis Miller at (414) 708-4251 cell / (414) 286-5942 office. If neither Mr. Berdine nor Mr. Miller is available, then the contractor shall contact the dispatcher at (414) 286-5944.

Plan changes must be approved by the City of Milwaukee's electrical services supervisor. The primary contact is Mr. Dennis Miller, Street Lighting Operations Supervisor, (414)286-5942 office, (414)708-4251 mobile.

Provide two sets of red lined as-built plans to the City of Milwaukee electric services supervisor upon completion of conduit installation. The plan sets are incidental to the conduit installation, and no extra payment will be made by the City.

28. Adjusting Manhole Covers.

This work shall be according to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and

elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.

29. Adjusting Water Boxes and Adjusting Water Manhole Frames & Lids, Item SPV.0060.01 and Item SPV.0060.02.

A Description

This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the paving project, to all city water service boxes, water gate valve boxes and water manhole frames & lids located within the project limits.

B Materials

All material for the adjustment of these facilities must meet City of Milwaukee specifications and will be provided by the City of Milwaukee by contacting Jesse Hernandez, Milwaukee Water Works, at (414) 708-2670 (or Dave Goldapp, Milwaukee Water Works at (414)286-6301). If there is contractor damage, the materials must still be provided by the City of Milwaukee, however, in this case, the contractor will be charged for all materials. Materials furnished by the City of Milwaukee and not used on the project shall be delivered back to DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th St. Materials being returned must be accompanied with a “surplus material” form completed by the Public Works Inspector assigned to the project.

C Construction

All water service boxes, water gate valve boxes and water manhole frames & lids within the project limits shall be adjusted to proposed elevations by the contractor using materials meeting city specifications.

The city will locate, mark, inspect and repair all water service boxes, water gate valve boxes and water manhole frames & lids within the limits of the project prior to commencement of work on the project.

Throughout the duration of the project, the contractor must ensure that all water service boxes, water gate valve boxes, and water manholes are adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by city forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility.

Upon completion of the contract, the city will inspect all water facilities to ensure the water boxes and manholes are clean, properly aligned, and accessible. The contractor shall be responsible to make identified repairs and adjustments, and if any repairs or adjustments are made by the city, the cost will be charged to the contractor.

D Measurement

The City will measure Adjusting Water Boxes and Adjusting Water Manhole Frames and Lids as each individual unit acceptably completed.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Adjusting Water Boxes	Each
SPV.0060.02	Adjusting Water Manhole Frames and Lids	Each

Payment is full compensation for all excavation, backfilling, disposal of surplus materials, water box or manhole clean-out, and restoration of the work site; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

30. Junction Boxes 12x16x8-Inch, Item SPV.0060.03**A Description**

Furnish and install 12" x 16" x 8" electrical boxes for use as pull boxes on 2 1/2-inch rigid nonmetallic schedule 40 conduit installations.

B Materials

Furnish junction boxes made by an approved cast iron manufacturer and having hot dipped galvanized coating. The covers and removable flanges shall be cast iron with a hot dipped galvanized coating and designed for sidewalk applications. The covers and flanges shall be interchangeable to permit replacement without disturbing the box or conduit system. Furnish covers with a cross checked pattern for pedestrian traffic and equipped with pry bar slots, neoprene gasket and recessed stainless steel cover screws.

Supply a stainless steel 1/4" x 18" grounding lug on all boxes on a side of box opposite the entering conduit.

Direct all materials questions to Mr. Dennis Kozelek at (414) 286-3252.

C Construction

Furnish and install all junction boxes. Provide 1-inch nonmetallic drains in the bottom of all junction boxes. Cut junction box conduit and elbow holes in field.

D Measurement

The City will measure Junction Boxes 12 x 16 x 8-Inch by the individual box acceptable completed.

E Payment

The City will pay for the measured quantity at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Junction Boxes 12 x 16 x 8-Inch	Each

Payment is full compensation for providing all materials, drains and fittings, including the junction box and cover, grounding lug and stainless steel mounting hardware; for properly disposing of surplus materials; and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.

31. Railing Steel Type C2 Galvanized B-40-899, R-40-606, R-40-607, R-40-608, R-40-609, Item SPV.0105.01, SPV.0105.02, SPV.0105.03, SPV.0105.04, SPV.0105.05.

A Description

This special provision describes fabricating, galvanizing, painting and installing railing in accordance with Sections 506, 513 and 517 of the Standard Specifications and the plan details, as directed by the Engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Railing assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Vent holes shall be drilled in members as required to facilitate galvanizing and drainage. Location and size of vent holes are to be shown on the shop drawings. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

B1.2 Two-Coat Paint System

After galvanizing, paint all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's

recommendations, matching the specified color shown on the plans. Use a preapproved top coat that is resistant to the effects of the sun. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applicator. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint manufacturers and products given below. An equivalent system may be used with the written approval of the Engineer.

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time¹ Between Coats (hours)
<u>Sherwin Williams</u> 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 847-330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
<u>Carboline</u> 350 Hanley Industrial St. Louis, MO 63144 314-644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
<u>Wasser Corporation</u> 4118 B Place NW Suite B Auburn, WA 98001 253-850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
<u>PPG Protective and Marine Coatings</u> P.O. Box 192610 Little Rock, AR 72219-2610 414-339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

¹ Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, Contractor shall repair or replace railing assemblies to the approval of the Engineer at no additional cost to the City. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the Engineer.

C2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the City. The Contractor shall provide the Engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement

The City will measure Railing Steel Type C2 Galvanized B-40-899, R-40-606, R-40-607, R-40-608, R-40-609 as a single lump sum unit for the structure where railing is satisfactorily furnished and installed.

E Payment

The City will pay for the measured quantity at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Railing Steel Type C2 Galvanized B-40-899	LS
SPV.0105.02	Railing Steel Type C2 Galvanized R-40-606	LS
SPV.0105.03	Railing Steel Type C2 Galvanized R-40-607	LS
SPV.0105.04	Railing Steel Type C2 Galvanized R-40-608	LS
SPV.0105.05	Railing Steel Type C2 Galvanized R-40-609	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting, and installing the railing, including any touch-up and repairs; and for furnishing all labor, tools, equipment, materials and incidentals necessary to satisfactorily complete the work.

